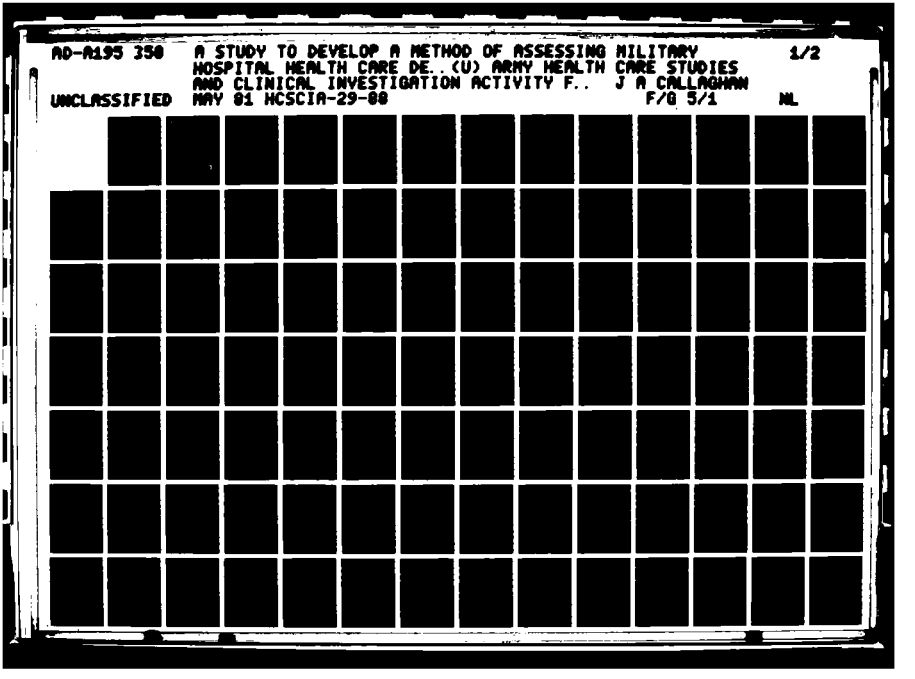
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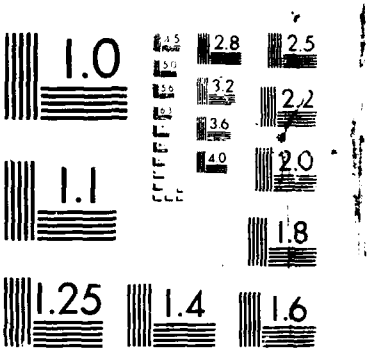

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This study placed an emphasis on gathering health care delivery performance data in a systematic manner and consolidated problem lists for a quality assurance committee which would evaluate and correct identified problems.

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A STUDY TO DEVELOP A METHOD OF ASSESSING MILITARY HOSPITAL HEALTH CARE DELIVERY PERFORMANCE FOR USE IN A QUALITY ASSURANCE PROGRAM

A Problem Solving Project

Submitted to the Faculty of

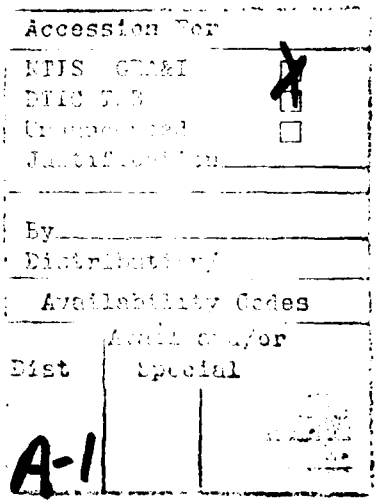
Baylor University

In Partial Fulfillment of the

Requirements for the Degree

of

Master of Hospital Administration



By

Major John A. Callaghan, MSC

20 May 1981

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The staff and community members who participated in this project are to be thanked. Hopefully, their contribution will lead to an improved health care delivery program. Major John McMenamin is thanked for the Kendall W computer program and his assistance and support. Major David Oatway's help with statistical analysis and his availability to discuss the project is greatly appreciated. My thanks goes to Lieutenant Colonel Austin Schlenker for his health care marketing talks that helped form the idea for this project. My appreciation to Colonel Donald Naylor for patience with his resident. My sincere appreciation to Ms Pat Guest for her careful editing and typing. Her contribution to this paper was essential for it's completion. This paper is for my daughters so when they become independent health care consumers, their ideas will help guide the community hospital in its health care delivery.

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INTRODUCTION

Development of the Problem

Today's health care environment is strongly influenced by six broad processes: technology, rising consumer expectations, changing morbidity, economics, federal intervention, and provider accountability.[1] In 1973 Congress passed Public Law 92-603, the Professional Standards Review Organization Bill (PSRO). This bill was an answer to the government's increasing interest in the quality of health services purchased through Medicare and Medicaid. Whether the law has served its purpose remains to be seen as not all states have review bodies. The Reagan administration proposes to repeal the PSRO statute by the end of fiscal year 1983. This bill did stimulate the Joint Commission on Accreditation of Hospitals (JCAH) to include professional review in its requirements for quality assurance (QA). This requirement was published in the JCAH's Accreditation Manual for Hospitals in 1974.[2] The professional review became the Professional Evaluation Program or PEP. It was a process oriented, retrospective audit of the medical record to evaluate patient care. The number of required audits was based upon the hospital's total admissions per year. This requirement was dropped in 1978 in favor of allowing hospitals to do as many audits as they believed necessary. Problems with the audit, as a sole evaluator of quality assurance, were high costs and resistance by physicans and nurses to "cook book" review. Farrington, et al., stated that the process had become a game of fulfilling requirements in a documentable, quantifiable format to satisfy others.[3] Thus, in 1980, the JCAH published new standards for QA which emphasized quality and flexibility. The standards became effective on 1 January 1981. The new standards have been written with a strong emphasis on

experimentation and flexibility by individual hospitals. No longer is a single formula or process for all hospitals advocated by the JCAH.[4] The QA program is to have a broad range of coordinated activities to ensure the quality of care delivered meets acceptable, professional standards. The 1981 Accreditation Manual for Hospitals defines QA as: ". . . a well defined, organized program designed to enhance patient care through the ongoing objective assessment of the important aspects of patient care and the correction of identified problems".[5]

The basic mechanism of the QA program lies in the essential components. These are: 1) identification of important or potential problems or related concerns in the care of patients; 2) objective assessment of the cause and scope of problems or concerns, including the determination of priorities for both investigation and resolution of problems; 3) implementation of decisions or actions designed to eliminate problems insofar as possible; 4) monitoring activities designed to assure that the desired results have been achieved or obtained; 5) documentation that reasonably substantiates the effectiveness of the overall program to enhance patient care and assure sound clinical practice.

Simply stated, a hospital must identify problems, assess the causes, prioritize the problems for resolution, implement actions, monitor the actions, and evaluate their results and the program's effectiveness.

Hospitals must not jump into the new QA program without careful planning. First, hospital goals must be addressed and the current QA program assessed. Only then, can a hospital implement a new QA program or modify an existing one. The QA Guide, published by the JCAH, contains specific guidelines to perform this task.

The QA program begins with the identification of problems, real and

potential, related to patient care. The importance of this step must not be underestimated. Failure to identify meaningful problems affecting health care delivery will result in the QA program being only an exercise, much like performing a required number of audits. Hence, the problems must be identified before they can be verified.

Traditionally, there are many sources for problem identification and varied objective and subjective methods for verification. Sources such as medical records, hospital reports, or patient complaints are compared to an established criteria or norm and conclusions are drawn. The criteria can be internal, developed by staff; or external, developed by an outside agency like JCAH. They can be either explicit or implicit. A national fire code can require automatically closing fire doors, an easily evaluated criteria. A professional standards review organization can require patients to be hospitalized only as long as medically necessary, a very subjective criteria. Thus, a hospital must not limit problem identification to a single source, nor to only external or internal evaluations made by comparison to objective or subjective criteria. A hospital must use meaningful sources to identify strengths and weaknesses in its health care delivery.

Historically, the military hospital sought compliance with external inspecting requirements as a quality care measurement rather than internal problem identification. Problems identified by hospital staff, committees, or patients usually are resolved as quickly as possible so as not to "display dirty laundry." The Joint Commission on the Accreditation of Hospitals' accreditation survey and the US Army Health Services Command's Annual General Inspection have been used as problem identifiers. The validity of these problems relative to patient health care delivery has not been evaluated;

hospital's purpose was to comply with the requirement. Two military hospital problem identification process are the Health Care Consumer Committee and the Health Services Command Outpatient Satisfaction Survey. The Health Care Consumer Committee is composed of the military hospital commander, his senior physician, and several high ranking military community officials. This committee is required at each US Army hospital. Its purpose is to maintain a dialog between the hospital and the community. A review of the minutes at Lyster Hospital indicated that very few problems were being discussed and the meeting frequency was reduced because of so little activity.

The Health Services Command Outpatient Satisfaction Survey is a written questionnaire designed to obtain the outpatient's response to certain questions. The survey is not individualized to each military facility and the results are not computed at the military hospital. The hospital perception is that the results are not used as a diagnostic tool, but rather to grade hospitals against each other.

The new direction of the JCAH QA program offers the military hospital an opportunity to address problems as it perceives them and not rely entirely upon external bodies or centrally direct committees and surveys. Identifying these problems will be an important step in the new QA program. Any method used to identify the problems should be personalized to the hospital and community and not be limited to traditional means or complaints. This is important because the military hospital, much like a health maintenance organization, has a captured population receiving all its health care from one source. The military hospital should use an approach which offers both providers and patients the opportunity to present problems to the hospital QA mechanism for action.

The problem is to develop a method of assessing military hospital health care delivery performance, as perceived by patients and providers, for use in the QA Program.

The method should be applicable to any military health care facility. That is, it should not be so specific for the Lyster US Army Community Hospital (Lyster), Fort Rucker, Alabama, area that it cannot be used at the Brooke Army Medical Center or Darnall Army Hospital.

Although military facilities operate in different areas of the United States, Panama, and Europe, their health care delivery responsibilities are similar. These hospitals have the primary mission of delivering complete health care services to their supported population. This population consists of active duty personnel, active duty dependents, retired military personnel, and the dependents of retired and deceased personnel. The active duty personnel are usually a young health group between the ages of 18 and 50. Their dependents range from newborns to fifty. Retirees and their dependents are an older group, usually forty years of age and older, with their children, usually teenagers. Thus, the populations supported by US Army facilities are similar in make-up with some post-to-post differences based upon the post's mission, surrounding civilian city size, weather, and cost of living. Regardless of location the complete health care delivery mission of all US Army facilities remains virtually the same.

Medical specialty differences in military hospitals, staff, and beneficiary population supported by these hospitals should be taken into consideration. The method should fit into the Joint Commission's QA program guidelines. The basis for this is the Surgeons General of the Army, Navy, and Air Force require JCAH accreditation of their military hospitals.

It should be noted that US Army hospitals do not provide skilled nursing

care nor long-term hospital care. Also, if a certain specialty or subspecialty is not available at the US Army hospital, the beneficiary may elect to use a civilian physician for that care and continue to use the military facility for all other care. The US Army does not operate specialty hospitals, which provide only one type of care or treat one specific person, such as a psychiatric hospital or an outpatient surgery center. The complete health care mission remains.

The data gathered from the research must be useful to Lyster's QA program. Lyster's QA committee should be able to use the data for a valid appraisal of the hospital's performance.

The project will be to develop prioritized problem lists from the data gathered during the methodology research. The methodology will use one questionnaire to obtain basic data about hospital problems and another questionnaire to prioritize the most identified problems. The problem lists may be used by the hospital's QA committee to assess and prioritize hospital problems. QA committee actions to correct identified problems and evaluate the effectiveness of those actions will assist in evaluation of hospital performance. The important step is to identify the problems.

Limitations and Assumptions

It was recognized that some individuals would not respond to the questionnaire because of apathy or fear of reprisal. Some apathy had been fostered by the hospital's previous lack of response to patient needs. The hospital had the nickname "Battlestar Lyster" and "Fort Lyster" because of the difficulty patients experienced in gaining entry into the health care system. A definite "we versus they" attitude existed between the patients and staff.

The staff held a similar attitude toward the hospital's headquarters. The headquarters was perceived as an inanimate object that made decisions without regard to staff input. This situation is changing with the assignment of a new hospital commander, but change is a slow process.

Some beneficiaries and staff members believe that reprisals will be taken against those who criticize the hospital. Beneficiaries believe they will receive a reduced level of care or be denied access to care. Lyster's small staff lends itself to the presumption that anyone who makes trouble will become known. Likewise, some staff members believe their military careers will be jeopardized if they criticize the hospital. This fear is substantiated by the Study on Military Professionalism prepared by students at the US Army War College.[6] The study found that officers subordinated their individual ethics and beliefs in fear of impediment of their career advancement.

The population considered for the study is limited by the availability of organized population directories. For active duty soldiers, the study is limited to those permanently assigned at Fort Rucker. Active duty USAR or USANG component personnel are not considered because they are not included on the Fort Rucker Standard Installation/Division Personnel System alphabetical roster. However, they are authorized care on a limited basis.

The active duty dependent population is limited to those residing on the post. This group is the only large dependent group already available on a listing. Other listings are available from wives clubs or religious organizations but these would not give an unbiased cross section of the dependent population. During the period, October 1979 to November 1980, twenty three percent, of the active duty dependent population resided on post.[7]

The retirees are limited to those within a forty mile radius of Fort Rucker for two reasons: First, the Fort Rucker Retirement Services Center maintains two mailing lists of retired personnel. One is an alphabetical listing of all retirees in the Fort Rucker area of responsibility. This area includes the southern half of Mississippi and Alabama, and the Florida panhandle (Appendix B). To choose at random from this list would select retirees who do not usually use Lyster Hospital because of distance. A second list is available of all retirees within a forty-mile radius of Fort Rucker. This list more accurately reflects the retirees who use Lyster Hospital; and thus, was the one used to randomly select retirees.

The survey was limited to voluntary participation. No effort was made to use military or supervisory authority to coerce patient or staff participation in the survey process. In the opinion of the surveyor, this type of coersion will not obtain a person's true perceptions about an operation, but will slant the data in favor of what the person believes the surveyor wants. Voluntary participation limits the survey to those who have strong positive or negative interests in the hospital operation. Individuals whose level of interest was low, or who had no interest, would not be required to participate.

Because the initial questionnaire was open ended, in that it made no suggestions about areas upon which to comment, the responses were not uniform and required some subjective judgment as to their meaning. All responses were reviewed by an independent individual who had no health care affiliation. He and the writer placed the responses into general categories. Differences were resolved in favor of the independent reviewer. Therefore, any bias the writer may have from his years of experience in the health care field was reduced. This grouping is subjective but is a consequence of the

limited to areas identified for comment.

The active duty population at Fort Rucker is unusually healthy when compared to other US Army posts. The incidence of hospital dispositions reflected in The Health of the Army, December 1980, supports this statement. The average hospital disposition rate per 1,000 soldiers is 157.2 in the United States compared with 7.3 at Fort Rucker. The reason may be that the majority of military personnel are in flight training or already flight qualified. Flight qualification requires a high state of personal health and subjects the individual to an annual medical flight examination. Physical examination failure removes the individual from flight status and leads to reassignment from Fort Rucker and a loss of monthly flight pay. This is a strong motivation to remain healthy and on flight status. Therefore, the active duty response of the study may be limited because fewer active duty personnel use Lyster Hospital as other military hospitals and, consequently, have no opinion about the services.

Three assumptions were made prior to the study's initiation. First: The Fort Rucker supported population would remain relatively constant in total numbers and in population mix between active duty, dependents of active duty, and retirees and their dependents during the survey period. Second: Opinions expressed by surveyed personnel would truly reflect the general beliefs of the population. Third: Individuals will base their responses on actual inpatient or outpatient experience with the hospital and not on heresay or rumors.

Literature Review

> "It would still seem that one of the best ways of finding out whether you're doing a good job is to ask people. Despite our growing sophistication we are still influenced by the personal and public opinions of others. If our aim is to produce what pleases, it ought not to be too difficult to find out if we have succeeded."
>
> Graff[8]

The majority of QA writings deal with solving problems already identified. An exception to this is Williamson's writings. He has researched extensively, using a modified nominal group technique, to discover problems and apply them to QA programs. He specifically directed his studies toward medical care evaluation studies of PSRO's and performance evaluation projects of the JCAH. This technique is more applicable today in the new problem-oriented, hospital-specific QA program advocated by JCAH. Williamson believes that using the hospital staff input motivates staff involvement, gives a wider perspective, and brings attention to a broader range of methods for assessing QA. He concluded that the judgments of local providers in identifying cost effective quality assurance priorities is highly reliable in medical institutions.[9]

The JCAH's QA Guide finds several sources for problem identification. Two sources, the practitioner and clinical department, are discouraged as a hospital's sole source. Individual practitioners have a limited interest which involves a few patients. Resources would not be used efficiently concentrating on a small clinical area. Rotating topics between departments can lead to unnecessary work as departments grope to meet their quotas.[10] The QA Guide does suggest that QA programs collect data from each QA activity and from other internal and external sources. The emphasis is on the quality assurance system generating the data from reports and committee meetings. Only passing mention is made of staff or patient surveys.[11] External information sources center on PSRO's, third party payers, and health system agency reports. Military hospitals have an advantage over civilian hospitals in that they can go to the potential patient for feedback about the system's good and bad areas. This ability broadens the military hospital's data potential for assessment and problem identification. For example, the patient who has

a particular reason for not using a hospital may never have that reason discovered by the civilian facility. The civilian's hospital choice option is not available to most soldiers and military dependents due to individual cost constraints; thus, the military patient routinely use the military hospital. The potential to improve services by linking patient expectations with outcomes is real.

Thompson writes that a good quality assurance program takes the patient's perspective. Patient distrust and misunderstanding can lead to law suits; thus, aiding patient expectations and outcomes will reduce liabilities.[12] Obtaining patient and prospective patient opinions is only good quality assurance practice.

Van Amring and Oestreicher have written that quality assurance encompasses three areas: structure, process, and outcome. Structure is the facility's capacity to render services such as a building, equipment, and credentials. Process is the actual care, that is, putting the patient in the right setting, and providing the right services at the right time. Outcome is the result, that is, the improvement or maintenance of the patient's total physical, emotional, and social wellbeing.[13] Again, the patient can be a useful source of problem identification in the areas of structure and outcome.

To emphasize this concept, Schmadl has written that the health care profession is assuring quality and that the quality is being assured for the patient. Consumers are becoming more involved in local, state, and national health policies. Providers that do not accept the patients' right or ability to question or provide input to the health care system will find third party payers and accreditation agencies dictating the quality standard for them.

A community oriented health care facility should not desire this outcome. Schmadl writes that quality assurance is not a means to itself, but a method of initiating change with a purpose.[14]

The importance of participant input to a quality assurance system is emphasized by Vanloh, et al., as the feedback mechanism that insures a continuous program update and review. This supports the continuous nature of the quality assurance program and its use as a cybernetic control system to effect change.[15]

From Fifer's writings, it can be concluded that lack of provider input into recent quality assurance programs has resulted in the ineffectiveness of the programs and few changes in physician behavior or organizational performance. The former quality assurance program concentrated on quality control rather than quality improvement. Actively soliciting provider input into the problem-oriented, hospital-specific quality assurance programs can make quality improvement a reality.[16]

Ackerman has found that active participation of the administrative staff in an ongoing peer review audit at Geisinger Medical Center has helped to assess current problems and led to effective institutional and departmental management changes. The program's strengths were its peer review as a constructive method of identifying weaknesses and management improvement which con-tributes to patient care.[17]

Provider-patient participation in quality assurance has been addressed on a limited basis by a different group of writers, under the label of "Health Care Marketing"; that is, the management of exchanges between the hospital and its publics. Exchanges are the values traded and publics are all organizations and people external and internal to the hospital with

potential or actual interaction with the hospital. The use of marketing concepts focusing on the relationships between the hospital and the various publics as a series of exchanges provides a useful addition to the traditional tools of hospital management.[18] In the new concept of quality assurance as a problem-oriented, hospital-specific program, the idea of utilizing the different hospital publics as input for the health care program only makes good sense. Marketing can be a valuable tool for identifying the unmet health service needs in a community, for helping to increase the rational deployment and development of hospital resources in a manner that maximizes efficiency, and for serving as a mechanism for increasing the satisfaction of all purchasers of health services.[19]

Levner compares hospitals that do not use marketing techniques to the railroads. Theodore Levitt's management classic "Marketing Myopia" detailed how railroads met their demise because they viewed themselves as being in the railroad business instead of the transportation business. Levner addresses hospitals that think they are in the hospital business instead of the health care business. She warns that hospitals not matching their resources and activities to community needs will not survive the 1980's.[20]

Similarly, military hospitals that do not use marketing techniques to identify their community's needs may not go under, but may have a dissatisfied community. This dissatisfaction will result in a high level of patient complaints, congressional inquiries into hospital activities, and a greater demand for the usage of the Civilian Health and Medical Program for the Uniformed Services (CHAMPUS). From a cost standpoint, it is more expensive in total costs to pay for care through CHAMPUS than in a military hospital; so, maximum use of a military facility and minimal use of CHAMPUS are valid

hospital goals.

Ireland notes that hospitals are in the business of serving patient needs, providing the best quality health care to the community served. Yet, the rising incidence of malpractice suits indicates a dissatisfaction with the services. Hospitals have taken an inside approach to delivering their product and have not surveyed the consumers of that product.[21] A marketing approach provides a mechanism to measure consumer expectations.

Falbert and Bonnen wrote about using marketing techniques to solicit problems from physicians who were eligible to practice at their facility. Problems were identified, corrective actions taken, and the result was an increase of 2000 bed days over a one-year period.[22]

Much of marketing is hospital-community relations; that is, hospitals responding to the pulse of the public rather than marching on as before. The hospital must be an active participant in the health care process and not a passive link between provider and patient. Ultimately, the community hospital must be judged by the satisfaction its programs generate among its identifiable publics.[23]

The question may arise: Is patient satisfaction a good measure of quality medical care? Does not this merely reflect the general attitude toward society and life? Graff writes that this may be confusing the art of healing with the technical aspects of quality care. Yet, there is evidence that patient satisfaction will manifest itself in appointment keeping and medication taking. Thus, the quality is of little value if the patient has a distrustful perception of the art.[24]

Quality assurance writers are recognizing that patients and providers are a good source of problem identification and evaluation. Responding to these sources usually results in health care delivery improvements. The new

JCAH requirements for QA require problem identification. The use of marketing techniques to identify population segments and perspectives can be useful in problem identification.

Research Methodology

During the development of this methodology an important consideration was applicability to other US Army hospitals. The intent was for other US Army hospitals to use the same techniques to gather data about health care delivery from their providers and patients. In developing the methodology, great care was taken to minimize the manhours spent and costs involved to the hospital. The design is such that a project officer or noncommissioned officer could execute the project with minimal clerical and mathematical help. The study techniques are simple but flexible enough to take into consideration the mission variations between different US Army hospitals. To make the methodology complicated, time consuming, and costly would discourage its use by other US Army hospitals and the overall value of this project as a QA mechanism.

The objectives of the methodology are:

a. To divide the health care providers and patients into groups with similar relationships to the health care delivery system.

b. To develop a survey for these groups which allows meaningful input about health care delivery.

c. To identify major problem areas from the survey results.

d. To prepare a second questionnaire to obtain a problem priority from the surveyed patient personnel.

e. To use a modified nominal group technique with selected hospital staff to solicit problem prioritization.

f. To evaluate the responses to the second questionnaire.

g. To compare the staff and patient responses with each other and with traditional outside agency reports.

h. To present the study findings to the hospital quality assurance committee for use as a problem source document in the hospital's problem-focused, result-oriented quality assurance program.

Segmentation

Segmenting the people to be surveyed into groups is the first step. Segmenting will enable the hospital to obtain the perspectives of people delivering and receiving health care at Lyster Hospital. This will be important since traditional performance evaluations come from external agencies such as the Joint Commission on the Accreditation of Hospitals and the Health Services Command Inspector General.

MacStravic calls constituents, the people, groups, or organizations that interact with the hospital. The constituents are divided into four groups: external, internal, client, and colleagues. Each group is briefly described: External constituents are supporters, suppliers, regulators, and the community. Supporters are groups that donate time or money to the hospital. Suppliers are companies that provide facilities and equipment to operate the hospital. Regulators are accrediting bodies and regulating agencies that permit or constrain the hospital's operation. Community is the general public not having an exchange with the hospital but having the potential for such an exchange. Internal constituents are the board of trustees, employees, physicians, and volunteers; physicians differing from employees in that usually there is not a formal contract between the hospital and physician. Client constituents are patients, clients, and public. Patients are individuals presently using the hospital's services as an

inpatient or outpatient. Clients are people receiving services but not direct patient care. The public is individuals benefitting from the hospital's services but not receiving them directly, such as parents of patient children. Colleague constituents are all the people or organizations providing similar services.[25]

This system for segmenting the population was considered but not fully used for the following rationale: As a military hospital, several population divisions do not apply. The military hospital does not fit into the external division. There are no supporters. Suppliers are managed by government-wide contract or competitive bid. Regulators more closely fit into the internal classification, board. The community fits into the client category because each community member is eligible for care and each military community routinely has only one hospital. The internal constituent category does reflect some military hospital relationships. The employees do have contractual arrangements with the hospital and volunteers are utilized, but not to the extent experienced in civilian hospitals. Military volunteer programs are routinely operated by the American Red Cross and are not hospital based programs. Physicians are either contractual employees with the hospital or members of the US Army, not independent practitioners. The committees are composed entirely of hospital employees or physicians, and the board's representative is the hospital commander. A military hospital's clients are similar to those described by MacStravic. Military hospitals do have colleague constituents similar to MacStravic's description. However, it is unlikely that these colleagues are in a good position to evaluate the quality of services or describe health care delivery problems.

MacStravic's constituent divisions do offer good categories for division of a hospital's publics. Strict application to Lyster Hospital or any military hospital would not be appropriate. However, some ideas will be incorporated. The division of clients (patients) from internal (hospital workers) would be very applicable. A great difference lies between the individuals receiving health care and the individuals providing the care.

The patients at Lyster are eligible medical care beneficiaries under Department of Defense directives. Several categories of eligibility for care exists, such as: active duty military; active duty dependents; and retired military. The specific categories chosen to survey were: active duty; their dependents; and retirees and their dependents. The reasons for this selection relate to two areas: use of the facilities and priority for care. The Medical Summary Report, Med 302, documents in detail inpatient and outpatient hospital usage by the different patient personnel categories. An analysis of patient personnel usage from July 1980, to and including October 1980, revealed that ninety eight percent of the inpatient care and ninety seven percent of the outpatient care is provided to active duty, their dependents; and retirees and their dependents as shown in table 1. In addition, US Army Regulation 40-3, Medical, Dental, and Veterinary Care, provides for priority of health care. The priorities are: first, active duty; second, dependents of active duty; third, senior Reserve Officer Training Corps personnel; and, fourth, retirees and their dependents. Thus, priority of care is a reason for dividing the patient population into the three segments. Another reason is the physical makeup of the groups. Active duty personnel are generally young, healthy men and women, between the ages of 18 and 48, who undergo active physical fitness programs and

TABLE 1

Usage of Lyster US Army Community Hospital
by Active Duty (AD), Dependents of Active Duty (Dep AD),
Retirees and Their Dependents (Ret), and Others
Period July 1980-October 1980

	AD	Dep AD	Ret	Others
July 80				
Admissions	57	37	53	4
Clinic Visits	7351	4882	2815	283
August 80				
Admissions	60	33	61	5
Clinic Visits	6983	4952	2966	360
September 80				
Admissions	61	60	53	5
Clinic Visits	6827	5039	2820	331
October 80				
Admissions	56	40	54	2
Clinic Visits	4222	5232	3057	305
Totals				
Admissions	234	170	221	16
Clinic Visits	25338	20126	11658	1295
Percent of Totals				
Admissions	37%	27%	34%	2%
Clinic Visits	43%	34%	20%	3%

routine physical examinations. Dependents of active duty are generally female spouses and children ranging from newborn to twenty-two year olds. Retirees and their dependents are generally fifty years of age and older. Their children are usually past the age eligibility for medical care. The health care needs of young, active people are usually different and, thus, should give a different perspective to the health care provided.

The traditional military division of inpatient and outpatient care will be surveyed. This is in keeping with the military hospital's ambulatory patient care program versus inpatient care. The different health care experiences of an inpatient versus an outpatient will be evaluated.

Another active duty soldier who has a different perspective of the military health care system is the unit commander. This individual is responsible for the continuous maintenance of his unit at combat readiness and the completion of training by the students in his unit. The unit commander is vitally interested in keeping as many soldiers present for duty as possible. The commander's concern is not so much with the efficiency of care, but its scope and effectiveness in delivering a healthy soldier to his unit. Medical work limitations given soldiers inhibit the commander's ability to perform his mission and offer the soldier a possible alternative to work. The hospital's inability to provide certain medical specialties requires the soldier to travel to other military installations; thus, reducing his present-for-duty status. Commanders will be surveyed to obtain input as to the hospital's mission performance.

Next to be segmented are the health care providers. These individuals are employed by Lyster Hospital to provide patient care and all associated administrative and ancillary services. MacStravic segments the internal

constituents into the board/committee, physicians, employees, and volunteers. The traditional Army segmentation is officers, enlisted members, and civilians. Neither segmentation, in and by itself, was considered appropriate for the staff.

The groups selected were physicians, nurses, administrators, paramedical personnel, ancillary personnel, and clerical personnel. Prior to a detailed reason for each group, a general comparison between military and civilian hospitals is helpful. Generally, civilian hospitals have a board of governors that is legally responsible for the hospital's operation. They hire an administrator to manage the hospital. Under the administrator are the various administrative, nursing, and ancillary personnel organized into departments. Usually, assistant or associate administrators operate these departments. The physicians are not employees of the hospital. They practice medicine at the hospital as staff members, but with the option to practice at other hospitals. In a military hospital, the hospital commander is a physician and responsible for the hospital's operation. He is the equivalent to a designated representative of the hospital board. Under the commander are two major services: administrative services and professional services. The Chief, Administrative Services is an administrator responsible for all administration, materiels management, and comptrollership. The Chief, Professional Services is responsible for all the medical care to include physician care, ancillary services, and nursing. Thus, in the military hospital, everyone is an employee but the division is made between professional and administrative services.

The traditional Army segmentation of officer, enlisted, and civilian

personnel would not consider the different training levels attained or the different provider-patient relationships. Officers may be physicians, nurses, administrators, materiels managers, therapists, dietitians, or pharmacists. To ignore the different educational backgrounds and patient relationships would be improper. Enlisted personnel have a more diverse background ranging from laboratory technologists and licensed practical nurses, to clerk typists and motor vehicle operators. Civilian employees run the gamut from physicians to housekeepers.

Logically, a combination of MacStravic's segmentation, traditional Army structure, and the individual's interaction with the patient was chosen. The groups were physicians, nurses, administrators, ancillary personnel, paramedical personnel, and clerical personnel.

Reasons for selecting physicians were the unique physician-patient relationship; the socialization process physicians experience during medical school; and their military status and influence as officers, department chiefs, and committee chairmen.

Nurses were selected because of their special patient relationship; their responsibility as directors of the hospital's largest department; and their formal education.

Administrators were selected because of their supply and service support role; their continued confrontation with providers over patient care versus resource conservation; their education; and their role as a sounding board for patient dissatisfaction.

Ancillary personnel were chosen because of their direct patient care support role and their educational experience. They provide pharmacy,

physical therapy, laboratory, radiology, and social work services under the order of a physician. They have daily contact with inpatients and outpatients providing direct patient care services. The education level for ancillary service personnel may be college or special schooling. The special schooling can be from several months to two years in length. Usually there is a requirement for certification by a state or national board.

Paramedical personnel are the medical corpsmen, nursing assistants, emergency medical technicians, and licensed practical nurses who provide direct patient care under the supervision of a nurse or physician. Their daily interaction with patients gives them a personal relationship with the patient which is different from the nurse's or physician's.

Clerical personnel provide the administrative support to the hospital that allows its day-to-day operation to continue. They may have either direct interaction with patients as receptionists or indirect interaction, as medical records clerks.

In summary, the external or patient groups, are: active duty; their dependents; retirees and their dependents; and unit commanders. The internal or staff groups are: physicians, nurses, administrators, ancillary personnel, paramedical, and, clerical personnel.

The question arose with respect to obtaining adequate input about inpatient or outpatient care if all surveyed individuals were randomly selected. There could be no absolute guarantee that a recent hospitalization or outpatient visit had been experienced. For this consideration, a month's discharged inpatients were chosen to survey. A separate survey of outpatients was considered but not performed for two reasons: First, the

Health Services Command Outpatient Satisfaction Survey was given in January 1981. The opinion was that another survey of outpatients would not add to the problem base; and, secondly, it was projected that the majority of problems identified by surveyed personnel were to be outpatient related. This, in fact, was the case as of the sixty three problem areas identified by staff, only six, or 9.5 percent, related to inpatient areas. Only two, or 1.9 percent of the 105 areas identified by patients, related to inpatient care.

Sample Size and Selection Process

After segmenting the staff and patients, the number of people to be surveyed and the method of their selection was determined. A census of the staff was taken; that is, a survey was sent to each hospital staff member. With the patient population, a sample was taken. The reasoning for each choice follows:

The staff at Lyster Hospital is relatively small compared with other Army Hospitals. The total military personnel assigned is 356. The total civilian work force is 205. Two documents were used to determine the number of assigned military and civilian personnel. The Unit Manning Report lists all military positions in the hospital with an individual assigned against each position. This document was screened and a listing of all military personnel by position was prepared. The Lyster Hospital civilian personnel alphabetical roster was screened and a listing of hospital civilian employees established. The total number of surveyed employees was: 251 military and 155 civilians. The Commander; Chief, Professional Services; Chief Nurse, and Executive Officer were not surveyed. These individuals comprise the hospital QA committee; and thus, significantly

influence the hospital's direction. If one of these individuals believed an area to be a problem, his/her position within the organization would allow action. Secondly, the purpose of the project was to compile a prioritized problem list for the QA Committee. Other groups not surveyed were the Aeromedical Activity, Dental Activity, and Veterinary Activity. The military and civilian personnel were divided into the five groups: physicians, nurses, administrators, ancillary, paramedical, and clerical. The division was made by military occupational specialty, specialty skill identifier, and civilian job code. A listing of these codes and their groupings is at appendix C.

The average population serviced by Lyster Hospital is at table 2. Approximately one percent of the population, in equal parts among: active duty, dependents of active duty, and retirees and their dependents were selected to be surveyed. Although their respective population strengths differ, their use is approximately the same. One hundred and fifty questionnaires were sent to each group. Individuals to receive the questionnaires were selected from available listings.

The active duty selection was accomplished as follows: The alphabetical listing of all active duty personnel at Fort Rucker was obtained from the US Army Aviation Center (USAAVNC) Adjutant General's Office. The total number of names on the listing (7345) was divided by one hundred and fifty. This yielded forty eight; thus, every forty eighth name on the roster was selected for a questionnaire. When the name of an individual assigned to Lyster Hospital was picked, the next name on the list was chosen to replace it.

TABLE 2

Active Duty, Dependents of Active Duty, and Retirees and Their Dependents Population in the Fort Rucker Health Services Area

	Active Duty	Dependents of Active Duty	Retirees and Their Dependents 1
October 79	6855	19020	13308
November	6945	21018	13308
December	7028	21219	13308
January 80	7237	21897	12924
February	7417	22425	12924
March	7433	22485	12924
April	7508	22749	12924
May	7441	22536	13251
June	7222	21909	13251
July	6451	22512	13251
August	7520	22794	13521
September	7612	23046	13251
Mean	7305	21967	13158
Standard Deviation	246.9	1116.5	171

This information is from the Comptroller, US Army Aeromedical Center, Fort Rucker, Alabama.

1. The retiree and their dependent population is not adjusted each month but is adjusted as new population information is received from the Retiree Services Center, Adjutant General's Office, US Army Aviation Center, Fort Rucker, Alabama.

Active duty dependents were limited to those living in Fort Rucker's Post housing. An alphabetical listing of these families was used. The listing was maintained at the USAAVNC family housing office. The total number of names on the roster (1554) was divided by one hundred and fifty; so, every tenth individual received a questionnaire.

The retirees are listed on two rosters at the USAAVNC Retirement Services Center. See Limitations, pages 7 and 8. The number of retirees on the forty-mile radius list (1873) were divided by one hundred and fifty; every thirteenth name was selected. In addition, questionnaires were sent to the members of the retiree council, a group of fourteen retired officers and enlisted personnel. This group was selected as an expert group for retiree affairs.

Each of thirty eight battalion or unit commanders was sent a questionnaire. Questionnaires were not sent to brigade commanders and large independent unit commanders; as these individuals are members of the Lyster Hospital Health Care Consumer Committee and have a direct input to the hospital commander.

The mailing lists were recorded on a programmable typewriter for use with the second survey. Addresses were typed on gummed labels, placed on the cover letter, and mailed in window envelopes. This method conserved time in address preparation and gave a personal touch to each letter.

The inpatient and outpatient samples were taken in this manner: Each inpatient discharged in December 1980 was sent a questionnaire. This represented approximately eight percent of the year's inpatients. Outpatients were surveyed using the annual Health Services Command Outpatient Satisfaction Survey. Each hospital in Health Services Command is allocated a

number of surveys based upon the daily average clinic visits. Lyster Hospital was allocated 175 questionnaires based upon 515 average daily outpatient visits. The survey is taken during one day. Every third outpatient visiting a clinic is given a survey. The data is sent to Health Services Command for computation and analysis. The results are returned to the hospital for evaluation.

A separate outpatient survey was not developed. It was believed that a majority of comments from the mailed survey would relate to outpatient care. Lyster experiences approximately 500 outpatient visits a day as compared to twenty inpatients a day.[26]

Another reason for using the Outpatient Satisfaction Survey was to compare its findings with the findings of the mailed surveys. Similarities and differences could be important in determining the usefulness of each.

Essentially, the questionnaires for active duty personnel, active duty dependents, and retirees and their dependents were identical. They were open-ended so that the individual could comment on any area. They asked for areas of good performance and areas needing improvement. This allowed the individual to comment on whatever is good or bad without leading questions. A cover letter signed by the hospital commander explained the questionnaire's purpose, that a second questionnaire would be sent, and that the project was very important to the hospital. The commander's signature on the letter attached more authority and credibility to the questionnaire than if it were signed by a lower ranking individual or nonphysician. See appendix E for a letter and questionnaire sample.

Initial Survey Development and Use

The survey developed for the hospital staff is at appendix D. The

questionnaire was designed to solicit responses about patient care. A cover disposition form was used to explain quality assurance, the purpose of the survey, the purpose of the group meetings, and how the information would be used. Each survey was individually addressed by name and section to ensure receipt by each staff member. A notice was placed in the hospital weekly bulletin two weeks after the survey was distributed reminding the staff to complete the questionnaire. A copy of the questionnaire was attached to the bulletin.

The questionnaire to commanders was shorter. Military unit commanders have very demanding jobs requiring long hours and being constantly on call. The questionnaire was designed to allow a commander to respond with a minimum of effort. The cover letter was oriented toward obtaining input about hospital roadblocks to mission accomplishment, how the input would be used, and the acknowledgement that commanders are very busy but their time spent in completing the questionnaire would be beneficial to all concerned. Again, the letter was signed by the hospital commander to give a commander to commander communication. See appendix F for sample.

The questionnaire for the retiree council was the same as for other retirees. However, the cover letter was changed to explain the project in more detail, to emphasize the council members' special position, and to have the members evaluate the results of the initial survey as a group. See appendix G for a sample.

The inpatient questionnaire was not completely open-ended. There were specific areas in which comments were desired. They were admissions, physicians, nurses, food service, and room cleanliness. A general comments section was established. The cover letter was signed by the commander. It

was written to solicit constructive comments and to explain what would be done with the comments. See appendix H for a sample.

Recording Questionnaire Responses

Initial questionnaire responses were separated into survey groups, such as retirees and their dependents or active duty. Each group's responses were listed individually. The individual responses were consolidated into like areas. The group's consolidated list was incorporated into a patient or staff list. The groupings and consolidations were reviewed by a non-health field individual familiar with survey and marketing techniques. Differences were discussed and resolutions were made in favor of the non-health field individual. It is believed that this helped reduce the chance of inappropriately grouping the data. The areas identified most by one group were the topics for prioritization by the staff or patients as appropriate.

At this time a consolidated listing of staff identified problems was presented to the QA committee for discussion. This helped prepare the QA committee for the prioritized listing to come and gave a current staff assessment of the hospital's performance. The list was complete so that items not appearing in the final problem list would be known to the committee.

Second Questionnaire

The second questionnaire was developed from the responses to the initial questionnaire. Areas of improvement identified in approximately ten percent of the returned surveys were listed for prioritization. In addition to the areas identified by specific groups the six areas most identified by all patients as a whole were listed for prioritization. Each group, active duty, dependents of active duty, and retirees and their dependents,

were sent a different survey, appendices I, J, and K. The cover letter for each survey was the same. The letter thanked the individual for participating, asked for completion of the second questionnaire, and ensured the respondent that all comments were being considered.

The second survey for commanders listed the areas identified by at least ten percent of the commanders. The cover letter thanked the commanders for their initial participation, asked that the second questionnaire be completed, and ensured them that every identified problem would be considered by the QA committee, appendix L.

The second patient questionnaire results were recorded in a matrix by patient group. Two matrices were developed for each patient group. One matrix was for ranking group specific problems and the other matrix was for ranking general patient problems. The matrices were constructed with problems as columns and rankings as rows to ease statistical calculations.

Statistics

The data collected will be in two forms. First is a frequency listing of problems initially identified by different groups. The importance of these problems will be determined by their frequency.

The second data collection will be prioritized problem rankings by the groups. The Kendall Coefficient of Concordance (W), Friedman Two-Way Analysis of Variance (Xr^2), and multiple comparison test (Rjs) will be used on these data.

The Kendall W measures the extent of association among several sets of rankings (judges) of several entities (problems). The W is useful in determining agreement among several judges and association among three or more variables. The value is from zero to one. Zero is perfect random association

or indifference. One is perfect agreement and association.

No tables exist stating exactly when W is a good or bad association, thus, its significance must be tested. The significance of W is tested using the W, number of judges, and number of problems being ranked. This produces a value which is compared to a chi square table for a determined level of significance. For this paper α = .005, the probability being the association occurred by chance. It is possible to have a W value that is low and a high level of significance. This indicates the association found is significant even though the W is low and one would assume otherwise. The value is given as X^2.

In computing the W, the total value of each problem's rankings is summed. It is called Rj. A low total Rj indicates the problem received many ones and twos from the judges. This indicates the problem is important. Likewise, a high Rj value indicates the problem is not as important. The Rj's are compared to find significance among the problems by two methods.

One method to examine the Rj's is the Friedman Two-way Analysis of Variance. This tells if the judges had significant agreement, that is, one problem was more important than another. The test does not indicate which problem is more important but that the Rj totals were different enough to indicate a preference.

The multiple comparison test provides a numerical value at a level of significance among Rj's. It is possible to determine which problems are significantly more or less important by comparing the individual Rj's. The level of confidence used is α = .05.

Appendix M offers a detailed explanation of the statistics with sample problems and calculations.

Modified Nominal Group Technique

The nominal group technique is a judgment process where structured group judgments are used in place of nonstructured open group interactions. For example, the group meets to consider a problem. Each group member outlines his/her solutions in writing. All solutions are placed on a board for all group members to see. Without discussion, all group members vote in writing on the test solution. The majority rules. Williamson modified this technique in a quality assurance program during a fourteen-year period. His technique consisted of selecting a multidisciplined team composed of physicians, nurses, technicians, administrators, and front desk personnel. This team was trained by simulating a priority session. During this session a list of problems was developed. After the training session a three to four week incubation period elapsed prior to the actual priority meeting. This allowd the team members to think about the topics, think of new topics, and read or research into a new area. [27] The priority setting meeting consists of:

a. The coordinator gives an introduction that explains the purpose of the meeting.

b. Each member has an opportunity to write down different topics for discussion.

c. Each member may sequentially present one topic from his/her list to the group. The topics are discussed to describe the impact on providers and patients and the change needed to effect improvement.

d. Each member weighs the importance of each topic numerically.

e. The numerical weights are averaged for each topic.

f. The group discusses the topics individually as to placement on the topic list.

g. The group numerically weighs each topic again. The coordinator totals the numerical weights to develop the final prioritized list.

After the meeting, the prioritized list is sent to the governing board. The entire procedure takes approximately two hours when led by an experienced individual. This process was believed to be too long for strict application at Lyster Hospital. The process that was used with the staff groups is as follows:

a. The coordinator briefs the group on the hospital's problem-focused, result-oriented quality assurance program.

b. The group is briefed on the staff survey's purpose of soliciting problem areas.

c. The group is asked to prioritize the problems numerically.

d. The coordinator computes each item's numerical value and lists the items in the priority order.

e. The coordinator asks each individual to comment on the list. After each individual comments, the disucssion is opened to any member for additional comments.

f. Each member is asked to prioritize the problems again.

g. The group's prioritized list is recorded for inclusion with other like groups and the staff as a whole.

The reason that the groups were kept to like workers was to obtain a perspective from that work group about health care delivery and reduce as much as possible the effect of group dynamics. Lyster Hospital has a varied assortment of employees with educational levels from no school to medical school and a variety of economic backgrounds. In addition, the military rank structure poses another barrier to individuals interacting freely in a

group discussion. It was judged best to keep the groups as like as possible with regard to rank structure and education. For the group's physicians, nurses, administrators, paramedics, and clerical, this posed no problem. For ancillary personnel, separate meetings were held for technicians and officer/senior graded civilian personnel. Undoubtedly, this reduced the affect of military rank on group dynamics. The results of the modified nominal group discussions were recorded by groups and then consolidated into a hospital staff prioritized list.

Summary of Methodology

In summary, the steps followed in preparing, executing, and evaluating the data are:

a. Segment the population and staff into groups with like perspectives or uses of the health care delivery system.

b. Survey the groups for problem areas and high performance areas.

c. Evaluate the initial questionnaire results.

d. Develop a second survey asking for ranking of identified problems.

e. Conduct modified nominal group discussions with various staff groups.

f. Evaluate the results of the second survey and group discussions using statistical methods.

g. Prepare a final problem list from patients and staff to the Quality Assurance Committee.

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II

DISCUSSION

This methodology requires two separate data evaluations. The first evaluation is the selection of problems for ranking from the initial patient and staff questionnaires. The second evaluation is the results of the problem ranking by the patient and staff groups. The discussion will begin with the initial questionnaire results as to what was collected, how it was grouped, and what problems were chosen for ranking. An initial evaluation will be performed on patient and staff data for general trends. The second questionnaire rankings will be evaluated for statistical significance. Comparisons will be made between the patient and staff ranking and among patient and staff groups.

The problems identified in the first questionnaire and the problems ranked in the second questionnaire will be discussed with respect to their input to the hospital's quality assurance program. Problems will be discussed as structure, process, or outcome. Briefly, structure problems are the capacity of a hospital to render quality services. The key objectives of the structure standards are to assure that the appropriate services are available and accessible to patients, that the health and safety of patients are protected, and that facilities have the organizational capacity to deliver care that meets professionally accepted standards. Process standards are based upon the resources used and the procedures performed in the provision of care. They are the hands-on type care delivered. Outcome standards are those used to measure the patient's health. The main outcome question to answer is: Has the care rendered improved, or not deteriorated beyond what is expected, the prognosis for the patient's condition?

The results of the first and second questionnaires will be compared to the inpatient questionnaire and the Health Services Command Outpatient Satisfaction Survey. Additional comparisons will be made between the findings of the Health Services Command Annual General Inspection, and the Joint Commission on the Accreditation of Hospitals 1981 survey.

The response to the initial questionnaire was very low, twenty-six percent for patients and seventeen percent for staff, for an overall response of twenty-two percent. Some reasons for the response were addressed in the introduction: apathy, previous poor community relations, and fear of reprisal. When the new commander took over in July 1980, one major problem was staff and community attitude. The community did not believe the hospital was interested in their health. The staff believed no one cared what they did. Because of this attitude problem, attempts to improve communications and solve problems met with suspicion and apathy from the staff and community. Only through the commander's persistence to improve this attitude, has a change come about.

The second questionnaire had a thirty-two percent response rate from patients and a twenty-one percent participation rate from staff. The improvement may support the idea that some problems were subsiding.

The response rate may have increased with advanced publicity about the questionnaires or increased command emphasis. A letter to proposed participants asking if they would participate may have eliminated those nonresponders and allowed replacement. This should be considered in future sampling techniques but care must be taken not to influence the randomness. Increased command emphasis often influences the responder into writing what is expected instead

of what he thinks.

The problem with a small sample is the data's validity. The wrong conclusions could be drawn or the real problems missed. However, the similarities among problems identified by the patients and staff would support the idea that those problems are real to the hospital and community. The idea of sampling again was considered but rejected because of the manpower costs involved and problem similarity. The initial mailing and data recording required approximately twenty-two hours or thirty-two percent of the project time. See appendix N. A goal of the methodology was to keep the manpower time and cost low so that the methodology would be attractive to other military medical facilities.

First Questionnaire Results - Patients

Approximately four weeks after the initial questionnaires were mailed to the patients, the last questionnaire was returned. The response from the patient groups was: Active Duty, 30/150 = 20%; Dependents of Active Duty, 38/150 = 25.3%; Retirees and their dependents, 41/150 = 27.3%; and commanders, 19/38 = 50%. Ninety-two different problems were identified by all the groups. Active duty personnel identified twenty-four problems; dependents of active duty identified fifty-four problems, retirees and their dependents identified forty-one problems; and commanders identified thirty-five problems. A detailed listing of all problems identified by patient group is at table 3. The table was compiled by separately listing each identified problem by patient group. Each group's problems were consolidated into a master list for that group. The consolidated problems were placed under major headings. The problems presented were the basis for selection of headings. For example, comments common to one area were grouped together such as those about the pharmacy

and emergency room. Problems that could not be grouped under a heading were listed separately. An example is the many comments made by unit commanders. The problems chosen for ranking were those general or specific problems identified by the patient groups. In some instances, general problem areas were chosen because to rank individual problems without considering the problem's general nature would result in significant problem areas being overlooked. For example, many patients identified staff attitude problems but not in those exact words. These attitude problems were identified as rudeness, lack of empathy, bad attitude, or impolite physicians and receptionists. Considered separately, these problems would not have sufficient frequency to be placed on the problem list to be prioritized.

An initial analysis of the problems identified by all patient groups and the unit commanders are: More Physicians Needed, 44 of 128 = 34.4%; Improve the Pharmacy, 43 of 128 = 33.6%; Improve the Staff Attitude, 40 of 128 = 31.3%; Improve the Appointment System, 22 of 128 = 17.2%; Improve the AMIC-GMC, 20 of 128 = 15.6%; and, Improve the Pediatric Clinic, 13 of 128 = 12.5%. It should be noted that attitude problems reflected in specific clinic areas were counted against the clinic and as attitude problems. The reasoning was that the problem was a hospital attitude problem and a problem with the specific clinic or person.

In analyzing these problems from a quality assurance viewpoint of structure, process, and outcome; the first four problems appear to be structure. The last two may be structure and process. It appears that people are identifying problems that are structural in nature. There seems to be little complaint with the care delivered. If all the patient problems are considered as to structure, process, and outcome; structure problems are mentioned on eighty two of the ninety two problems identified. The ten

TABLE 3

Areas of Improvement Identified by Active Duty,
Dependents of Active Duty, Retirees and Their Dependents, and Commanders

AREA	Active Duty	Dependents	Retirees & Their Dependents	Commanders	Total
No Bad Areas	5	1	6		12
All Departments Need Improvement	2				2
Dental Clinic					
Routine Care	1		6		7
Appointments			1		1
Receptionist's Attitude			1		1
Emergency Room					
General	3		2		5
Desk Personnel Rude	2	1	1		4
Bad Attitude		5			5
Waiting Time	2	1			3
Misprescribed Drug		1			1
Gynecology Clinic					
General	1	3	4		8
Appointment Waiting Time		1			1
Physical Therapy			1		1
EENT Clinic	1		5		6
Immunization Clinic	1	2			3
Pediatrics					
General		3	1		4
Ear Rechecks		1			1
Vitamin Policy		1			1
Waiting Time After Arrival		4			4
Nurse Practitioners Keep Mothers Away From Pediatricians		3			3
Personnel Attitudes		1			1
Appointment System					
General	2	2	11		15
No Walk-in Clinic	2		3		5
Have More Phone Numbers		1			1
Cannot Get In		1			1
Radiology					
Personnel Attitud		2			2
General	1		2		3
Waiting Time		1			1

TABLE 3

	Active Duty	Dependents	Retirees & Their Dependents	Commanders	Total
AMIC-GMC Clinic					
AMIC	3	2	1		6
GMC		2	1		3
AMIC-GMC			3		3
AMIC-people not called as they arrive		2			2
GMC Closed at Lunce			1		1
AMIC Personnel Attitude		3			3
GMC Appointments		2			2
AMIC Waiting Time for Appointment		1			1
AMIC-Time In/Out on Sick Call Not Recorded				2	2
Pharmacy					
General	2	1	3	1	7
Waiting Area			1		1
Refill System			3		3
Waiting Time	5	18		1	24
Expanded Hours Needed	2				2
Organize Prescription Lines		1			1
Have Over the Counter Drugs In Clinics		1			1
Have Special Privileges For Military Personnel				2	2
Stock Needed Drugs				2	2
Laboratory					
Inform Patients of Results	1		1		2
Takes Too Long For Results		2			2
Lab Results Lost		1			1
Receptionist Not at Desk		1			1
Janitorial Services					
General			1		1
Rooms		1			1
Attitude					
General Lack of Empathy	3	5		2	10
Saying No to Retirees			1		1
Bounced From Clinic to Clinic		2	1	1	4
Civilian's Attitude		1	2		3

TABLE 3

	Active Duty	Dependents	Retirees & Their Dependents	Commanders	Total
Attitude (con't)					
Physician's Attitude		2		1	3
Receptionist's Attitude		1		1	2
Care Based Upon Rank		1			1
Need More Physicians					
General		2	1		3
Orthopedics		5	3	1	9
Optometrists			2		2
Obstetrician/Gynecologist	2	7	3	3	15
Urology	1		4	1	6
Dermatology		4	2	1	7
Stop Physician Moonlighting			1	1	2
Physicals for Retirees			6		6
Medical Surgical Ward Staff			1		1
Inpatient Food			1		1
Staff Using Patient Parking	1				1
Medical Records Lost				2	2
CHAMPUS					
Advisor Not In	2				2
Better Explaination		1			1
See the Same Physician		3	1		4
Public Awareness of Services	2				2
Medical Evacuation Not Available to Other Army Hospitals			1		1
Sick Call For Refills	1				1
Long Wait For Appointment After Arrival	1	1			2
Initial Flight Physical For Females				1	1
Lost Paper Work Between Physical Exam and Review Board				1	1
Waiting Time For Glasses				1	1
Duty Limitations Explained Better on Sick Slip				3	3
Have 427th Med Co Perform Sick Call For 1st Avn Bde				1	1
Begin Sick Call at 0600				1	1
Get Tough With Malingers				1	1
Have Phone Recorder in Patient Affairs Office				1	1

TABLE 3

	Active Duty	Dependents	Retirees & Their Dependents	Commanders	Total
Staff Emergency Room with Physician Assistants and Nurse Practitioners for Nonemergencies				1	1
Have Weekend Sick Call				1	1
Have Physical Exams For Dependents Entering School				1	1
Improve Weight Control Testing To More Than Just Weight				1	1
Notify Unit Commander of Personnel in ER From Aircraft Accidents				1	1
Have Flight Students Receive Priority at Radiology				1	1
Provide Better Support to Students in The Altitude Chamber				1	1

problems considered possible process are: general emergency room treatment; a misprescribed drug; general gynecology treatment; physical therapy, opthalmology-otolaryngology; immunization, pediatric vitamin policy; nurse practitioners; general care of the AMIC-GMC; and improved follow-up care. These process problems represent 10.9 percent of all problems. No judgment can be made about an eleven percent dissatisfaction rate with medical care in comparison to other military or civilian hospitals. However, consideration of each individual group indicates where a group has trouble with the health care system.

Active duty personnel identified the following areas most often: Pharmacy, 9 of 30 = 30%; Staff Attitude Problems, 6 of 30 = 20%; the Emergency Room, 5 of 30 = 16.7%; and the Appointment System, 4 of 30 = 13.3%. It should be noted that 5 of 30 = 16.7% stated that there were no bad areas. The active duty personnel did not identify the AMIC-GMC or Aviation Medicine Clinic as problem areas, although these areas are where primary care is received and has the greatest potential for problems. The Pharmacy was identified as a problem by more active duty personnel than any other area. The comments about the appointment system are interesting. Active duty personnel have first priority for specialty clinic appointments and have a walk-in clinic for primary care, yet these were identified as problems. What this probably reflects is the soldiers' dependents' problems with entry to the health care system.

Dependents of active duty personnel identified the following problems: Staff Attitude, 23 of 38 = 60.5%; Pharmacy, 21 of 38 = 55.3%; More Physicians, 18 of 38 = 47.4%; Pediatrics, 13 of 38 = 34.2%; AMIC-GMC, 13 of 38 = 34.2%; and the Emergency Room, 8 of 38 = 21.1%. The areas identified were those

most used by the dependents of active duty. The AMIC-GMC, Pediatric Clinic, and Emergency Room are the primary health care entry points for dependents. The Pharmacy provides all outpatient medications. The large number of responses about attitude indicate that the dependents of active duty have fewer health care expectations met than the active duty or retirees and their dependents. The dependents of active duty comprise the largest segment of the population supported and this group is having more perceived trouble with the health care system than the other group. It should be a target group for improving hospital services.

The areas identified by at least ten percent of the retirees and their dependents were: Physician Shortage, 15 of 41 = 36.6%; Appointment System, 14 of 41 = 34.1%; Dental Care, 8 of 41 = 19.5%; Pharmacy Service, 7 of 41 = 17.1%; Otolaryngology - Ophthalmology, 5 of 41 = 12.2%; Gynecology, 4 of 41 = 9.8%; and Physical Exams for Retirees, 5 of 41 = 9.8%. Retirees and their dependents appear to have major problems getting into the health care system and obtaining the service they expect to be available. Identifying problems with the appointment system and the physician shortage would support this. Access to care is a major perception problem with retirees.

Unit commanders identified four areas as major problems. These were: Initiate OB Service, 3 of 19 = 15.8%; Pharmacy, 6 of 19 = 31.6%; Improve Profiles, 3 of 19 = 15.8%; and Improve Staff Attitude, 5 of 19 = 26.3%. The unit commanders appeared to have no problems with the entry into the system or the quality of care provided. What bothered them the most were hospital areas that kept their troops from performing duty. Waits at the pharmacy, unclear duty limitations prompted by illness or injury; and the use of civilian obstetricians who do not understand the soldiers' role were major

problems. These civilian physicians often place the soldier in a nonwork status long before delivery and create manpower shortages for the unit commander. The commander wants his troops returned to work as quickly as possible.

In addition to the problems reported, the patient groups were asked to identify best performance areas. These areas would indicate a meeting of patient expectations and the health care delivered. There were forty two different clinics, services, or individuals identified as best performance areas. The responses were grouped like the problem areas and are displayed at table 4. The areas with the highest positive response were: Pediatrics, 37 of 128 or 28.9%; Emergency Room, 31 of 128 or 24.2%; Dental Clinic, 16 of 128 or 12.5%; Inpatient Care, 16 of 128 or 12.5%; EENT Clinic, 16 of 128 or 12.5%; Gynecology Clinic, 15 of 128 or 11.7%; Pharmacy, 14 of 128 or 10.9%; and the Acute Minor Illness-General Medicine Clinic, 12 of 128 or 9.4%. It is interesting to note that the first six areas are all direct patient care areas. This could indicate that patients derive more satisfaction from the direct care contact than the other services connected with patient care. Of the forty two areas identified, 27 or 64.3%, are direct patient care areas.

From a quality assurance standpoint that considers problems as structure, process, or outcome, the majority of the best performance areas are in the process or direct patient care mode. The others are in the structure mode while none are in the outcome mode.

Active duty personnel identified pediatrics as the best area, 10 of 30 = 33.3%. The next most identified areas were Dental Clinic and Pharmacy each being identified by 5 of 30 = 16.7%. The area where active duty personnel

TABLE 4

Best Performance Areas Identified by Active Duty, Dependents of Active Duty, Retirees and Their Dependents and Commanders

AREA	Active Duty	Dependents	Retirees & Their Dependents	Commanders	Total
Generally Outstanding Care	3	1	4		8
No Good Areas	2	1		2	5
Emergency Room Services					
General	4	7	13	3	27
Information From the ER			1		1
After Hours Treatment			1		1
Captain Nabors		1	1		2
Internal Medicine Clinic		1	9		10
Laboratory	1	2	7		10
Preventive Medicine			1	1	2
Gynecology Clinic	3	11	1		15
Surgery Clinic		1	9	1	11
Dental Clinic	5	4	7		16
Podiatry Clinic		3	2		5
Outpatient Clinics			2		2
Active Duty Sick Call			1	1	2
AMIC-GMC		2	6	4	12
Dependent Care			1		1
Clinic Appointment System		1	1		2
Pharmacy	5	4	5		14
Inpatient Care					
General			5		5
Inpatient Surgery			2		2
Operating Room Staff			1		1
Nursing Care	1	1	2		4
Inpatient Rooms			1		1
Intensive Care Unit Personnel			2		2
Medical Surgical Ward			2		2
Pediatrics	10	24	3		37
EENT Clinic	2	5	8	1	16
Ophthalmologists		1	1		2
Orthopedic Clinic		1	1		2
Radiology	1	3	5		9
Special Testing			2		2
CHAMPUS Advisor	1	2	1		4
Flight Physicals	1	1		4	6
Flight Medicine	1	1		4	6
Community Health Nurse	1	1			2
Immunization Clinic	3	3			6
Medical Records Office	1	5	1		7
Same Day Servicel					1
Physicians	2	1			3
Hospital Staff	1	1			2
Captain Sova		1			1
Pediatric Ward Personnel	1	1			2
Telephone Advice		1			1
Captain Ching		1			1
Patient Administration				1	1
PRP Program				1	1
Community Mental Health				1	1

receive routine sick call treatment was not identified as a best performance area.

Dependents of active duty identified the Pediatric Clinic, 24 of 38 = 63.2%, and Gynecology Clinic, 11 of 38 = 28.9%, the most as best performance areas. The next closest area was the Emergency Room, 8 of 38 = 21.1%.

The individual groups had different perspectives on what they believed were the best hospital areas. Retirees identified the Emergency Room, 13 of 41 = 39%, and Inpatient Care, 15 of 41 = 36.6% as the hospital's best areas. The Internal Medicine Clinic and Surgery Clinic were identified by 9 of 41 = 22% of the retirees as a best performance area. In all probability this reflects the areas most used by retirees and their dependents.

Unit commanders identified the Acute Minor Illness Clinic, 4 of 19 = 21.1%; the Aviation Medicine Clinic, 4 of 19 = 21.1%; and Flight Physicals, 4 of 19 = 21.1%, as the best areas. These three areas are where the unit commanders' troops receive their routine health care.

In comparing the patients' best performance areas and most identified problem areas it may be said that the patients appear satisfied with the direct care and not satisfied with some of the structural items that lead to the direct care or availability of care as shown in table 5.

TABLE 5

Comparison of Best Performance Areas and Problem Areas Identified by Patients

BEST PERFORMANCE AREAS	PROBLEM AREAS
1. Pediatrics	1. More Physicians Needed
2. Emergency Room	2. Pharmacy
3. Dental Clinic	3. Improve Staff Attitude
4. Inpatient Care	4. Improve Appointment System
5. Ophthalmology-Otolaryngology	5. Improve AMIC-GMC
6. Gynecology	6. Improve Pediatrics

First Questionnaire Results - Staff

The initial staff questionnaire had an overall response of 72 of 406 = 17.7%. The staff identified 63 separate problems. The staff participated at the following levels: Physicians, 4 of 28 = 14.3%; Nurses, 10 of 49 = 18.4%; Administrators, 4 of 11 = 36.4%; Ancillary, 15 of 73 = 20.5%; Paramedical, 14 of 89 = 15.7%; and Clerical, 25 of 156 = 16%.

The problems were grouped into general problem areas. Unlike the patient problems that fell into specific clinic or service areas, the staff problems fell into general areas that affected more than one service or clinic. Some problems fell under general headings such as staff patient relations or personnel shortages. Table 6 displays the problems by staff group and general or specific area.

Problems chosen for ranking were those specific problems identified by approximately 10 percent or more of the responses. These problems were: Have a Walk-in Clinic, 16 of 72 = 22.2%; Improve Patient Staff Relations, 15 of 72 = 20.8%; Physician Shortage, 11 of 72 = 15.3%; Stop Abuse of the Emergency Room, 7 of 72 = 9.7%; Have an Evening Pediatric Clinic, 7 of 72 = 9.7%; and Reduce Pharmacy Waiting Time, 7 of 72 = 9.7%.

The reason for selecting specifically identified problems in place of the general problem areas was two-fold. First, problems identified by the staff did not fit into clinic or service groupings like the patient identified problems. Second, the general problem areas were very broad categories. Identifying personnel shortages or physical plant improvements as a high priority problem does not tell the hospital's QA committee specific areas to make improvements. Thus, the ranking of specific problems would be more beneficial to discovering cause of general problems.

TABLE 6

Staff Identified Problems by General Category

PROBLEM	Physicians	Nurses	Administrators	Ancillary	Paramedics	Clerical	Total
Personnel Shortages							
Physician Shortages	1			5		5	11
Improve Civilian Hire Time					1		1
Reduce Moonlighting					1	1	2
Reduce Turnover Rate in Clinics					1		1
Add a Pharmacist				1			1
Hire More Administrative and Housekeeping Staff for Clinics		1					1
Hire an MD for ER	1						1
Hire More Nurses	1						1
Patient Staff Relations							
Improve Patient-Staff Relations		2	3	4	2	4	15
Establish an Information Desk					1	2	3
Improve Staff Knowledge of the Hospital						1	1
Improve Troop Discipline						1	1
Improve Enlisted Support of Physicians						1	1
Have a Problem Discussion Group of AAMC Personnel						1	1
Improve No Show Rates					1		1
Improve Morale				2			2
Improve Patient Education				1			1
Use Military as Supervisors				1			1
Use Civilians as Supervisors					1		1
Have Clinic Personnel Under One Department		1					1
Charge a Fee For ER Use		1					1
Stop Eating and Smoking in Front of Patients			1				1
Have Clinic Doors Open During Operation						1	1

TABLE 6

	Physicians	Nurses	Administrators	Ancillary	Paramedics	Clerical	Total
Improve Access to Care							
Stop Abuse of the ER	2				3	3	8
Reopen Central Appointments						1	1
Have a Walk-in Clinic		5	3	2	4	2	16
Eliminate Specialty Clinic Referral Requirement						1	1
Have Clinic & Ancillary Services Open During Lunch						1	1
Have a Controlled Sick Call System						1	1
Create a Health on Wheels						1	1
Have Uniform Sick Call Hours						1	1
Have an Evening Pediatric Clinic		1			3	3	7
Have Follow-up Care With The Same MD or ANC				1			1
Reduce Administrative Time For Personnel							
Reduce Meetings for MD/ANC		1				2	3
Centralize Training and Committee Meetings					1		1
Take Clinicians Off AOD				1			1
Establish an Escort Service to Transport Patients and Lab Specimens							
Pharmacy							
Reduce Waiting Time			1		3	3	7
Stop Over the Counter Meds				1			1
Medical Care and Treatment							
Improve Staff Knowledge of Infection Control						2	2
Curtail Abuse of STAT Lab Work						1	1
Standardize IV Administration Sets		1		1			2
				1			1
Establish an IV Team		1					1
Physical Plant Improvements							
Improve Hallway Lighting		1			1	1	3
Consolidate All Hospital Functions						1	1

TABLE 6

	Physicians	Nurses	Administrators	Ancillary	Paramedics	Clerical	Total
Physical Plant Improvements (con't)							
Improve Clinic Telephone Capabilities					1		1
Enclose Nurses' Station on the Med Surg Ward	1						1
Improve Janitorial Services				1			1
Dining Facility							
Improve Food						1	1
Return to Tray System				2			2
Improve Equipment in Food Service Division				2			2
Allow Patients to Eat in the Dining Hall		1					1
Management of Patient Complaints							
Send Unsatisfied Patients to the NCOIC/OIC Prior to the Patient Assistance Officer			1				1
Use Chain of Command for Complaints				1			1
Improve Laboratory Performance		1					1
Improve Patient Transport Vehicles					2		2
Establish Hospital Procurement Office				2			2
Enforce No Smoking Rules		1					1
Have Logistics Pick-up Broken Equipment Faster				1			1

An initial analysis of the results showed that the majority of the problems identified by the staff (34 of 63) were centered in three related areas. These were: personnel shortages, patient-staff relations, and improving access to care. Five of the six problems for prioritization came from these three areas. Two areas, patient staff relations and improve access to care, were mentioned by almost everyone who answered the questionnaire (70 of 72). These two areas are closely related. A disruption in health care services whether expected or not can cause patient hostility. The patient takes his frustration out on the clerical, paramedical, and ancillary staff. The staff perceives that if access is improved and if the patient is made more aware of the staff's problems, then health care perceptions will be improved. The staff sees a specific solution as having a walk-in clinic and increasing the physician staffing. The staff appears to believe the fewer people who are refused care for any reason will make their jobs much easier.

The physicians did not perceive any patient-staff relations or access problems. This may not be concluded for all hospital physicians since only four of twenty-eight responded. Nevertheless, those physicians did not see the problems. Perhaps the physician and patient do not discuss access or appointment problems but concentrate on the health encounter. Perhaps it is not encouraged or is discouraged. If the four physicians do represent the perceptions of the other physicians, then the physician staff requires some education into access and patient relation problems so potential solutions can be discussed.

If one looks at the problems from a quality assurance perspective of structure, process, and outcome, an interesting result is observed. None of

the identified problems are outcome related. That is, none of the problems have to do with measuring the patients' health. The staff believes the best care is being provided. Only establishing an IV team and establishing a metabolic support team can be called process problems. These problems address the method in which the health care is performed on the patient. The other sixty problems are all structure problems and thus, should be able to be corrected with the addition of funds, personnel, equipment, or a change in operating policy. It is interesting that the staff who delivers health care finds no fault with the process of administering care but does find fault with the structure and surroundings in which the care is delivered. The staff must consider themselves performing their hands-on health care role in an outstanding manner but are hindered by structure problems. They find little fault with themselves.

Another general area for comparison is inpatient versus outpatient problems. The staff identified only one inpatient problem (1 of 63). These pertained to the food service tray system. Both people who identify this problem work in food service and think the current tray system is not as good as the old cart system.

Both the patients and staff have identified the need for more physicians, improving patient staff relations, and improving the pharmacy. See table 7. The areas of the appointment system, having a walk-in clinic, stop abuse of the emergency room, and have an evening pediatric clinic all have to do with access to care when demanded. Considering these areas to be in agreement, the only areas differing between the patients and staff are the AMIC-GMC and pediatric clinic. This would indicate that the staff and patients have a similar perspective as to the problems in the hospital and are both good sources for problem identification.

TABLE 7

Problem Identification Comparison
Between Patients and Staff

Patients	Staff
1. Need More Physicians	1. Have a Walk-in Clinic
2. Improve Pharmacy	2. Improve Patient-Staff Relations
3. Improve Staff Attitude	3. Need More Physicians
4. Improve Appointment System	4. Stop Abuse of the ER
5. Improve AMIC-GMC	5. Reduce Pharmacy Waiting Time
6. Improve Pediatrics	6. Have an Evening Pediatric Clinic

Statistical Considerations and Analysis-Problem Prioritization

The second questionnaire asked patients to prioritize specific problems. The staff was asked to do likewise in group discussions. The data was analyzed and is presented in individual tables for discussion. Only the first table will be discussed in detail. The tables will list the problems and their Rj totals. Statistical test results will be below the rankings. These are the Kendall Coeficient of the Concordance (W), the coeficient's significance (X^2), the Friedman two-way analysis of variance (Xr^2), and the multiple comparison of Rj totals (Rjs). Refer back to the introduction and to appendix M for statistical explanation.

Initially, the patient responses as a group will be analyzed. Next, each group will be examined for rankings of general and specific problems. The staff will be examined as a whole and then individually analyzed by group. A summary of the significant findings will be last.

Problem Prioritization - Patients

A second questionnaire was developed for patients. The questionnaire

asked the patients to prioritize two separate lists. The first list was the problems most identified by the specific patient group. The second list was the problems most identified by all patients. For clarity, the first list will be referred to as the specific list and the second list as the general patient problem list.

The questionnaires were mailed to the same individuals who received the initial questionnaire. The response time was three weeks, that is, no questionnaires arrived after three weeks from mailing. The response rate was as follows: active duty, 43 of 150 = 28.7%; dependents of active duty, 45 of 150 = 30%; retirees and their dependents, 59 of 150 = 39.3%; and unit commanders, 32 of 38 = 84.2%. The group return rate for patients (less unit commanders) was 32.7%.

TABLE 8

Total Patient Ranking
of General Patient Problems

Problem	Rj Total
1. Need More Physicians	305.2
2. Improve Staff Attitude to Patients	477.2
3. Improve Appointment System	477.7
4. Improve Pharmacy	513.2
5. Improve Pediatrics	567.2
6. Imporve AMIC-GMC	621.2

Statistics	
Kendall W	.170
X^2	120.11
Xr^2	19.10
Rjs	92.05

X^2 and Xr^2 values are compared to a chi square table with df=5 and the value for α =.005 is 16.75

As a group, the patients produced a Kendall W of .170 with the probability of the association occurring by chance being less than .005. See table 8. This indicates the entire group did not use the same criteria to evaluate the problems, but there was enough similarity to rule out the ratings occurring by chance at $p < .005$. The Xr^2 indicates a preference for one problem over another with the chance of the Rj totals occurring by chance at $p < .005$. This means the Rj totals (sum of problem rankings by individual) were different enough to state the group had a preference. The Rjs value, 92.05, indicates the significantly important problem's numerical difference at $p < .05$. This group identified the need for more physicians as significantly more important than any other problem (305.2 + 92.05 = 397.25). Likewise, improving the AMIC-GMC is significantly less important than the need for physicians, staff attitudes, the appointment system, and the pharmacy. The appointment system and staff attitude were significantly more important than the pharmacy at $p = .069$. This places the problems in four groups: physicians, attitude and appointment system, pharmacy, and pediatrics and AMIC-GMC. In general, patients perceive a shortage of medical care, access to care, and impersonal treatment by the staff as the hospital's major problems. These problem areas relate to quality assurance structure rather than process or outcome. Areas with the potential for process problems are ranked at the bottom. This indicates an acceptance with the health care provided but not with the surroundings or availability. See table 9 for a summary of significant patient problems by Rj comparison.

Each patient group, active duty, active duty dependents, and retirees and their dependents will have their responses analyzed. Comparisons will be made between the individual groups and the patients' combined group.

TABLE 9

Significant R_j Differences Among Problems Ranked by Patients

	PROBLEM					
	1 Appointment System	2 Improve AMIC-GMC	3 Need More Physicians	4 Improve Pediatric Clinic	5 Improve Pharmacy	6 Improve Staff Attitude
STAFF GROUP						
Active Duty	2		2,5	2		2
Dependents of Active Duty			1,2,5			
Retirees and Their Dependents	2,4		1,2,4,5,6		4	4
All Patients	2		2,4,5			2

Interpretation of chart is as follows: Active duty personnel think problem 1 is significantly more important than problem 2, problem 3 is significantly more important than problems 2 and 5, problem 4 is significantly more important than problem 2 and problem 6 is significantly more important than problem 2. ($p=.05$)

TABLE 10

Active Duty Ranking
of General Patient Problems

Problem	Rj Total
1. Need More Physicians	104.2
2. Improve Appointment System	135.2
3. Improve Pediatrics	139.2
4. Improve Staff Attitude to Patients	141.2
5. Improve Pharmacy	171.2
6. Improve AMIC-GMC	195.2

Statistics	
Kendall W	.166
X^2	34.91
Xr^2	42.00
Rjs	50.24

X^2 and Xr^2 values are compared to a chi square table with df=5 and the value for α =.005 is 16.75.

The data in table 10 shows the association not being strong, W = .166, but the problems being significantly different. The soldier preferences are similar to the patient group with a switch between pediatrics and pharmacy.

Although the Kendall is low the association and Rj total differences are significant in ranking specific problems. See table 11. The low associations may be expected among soldiers because their ages, sex, and rank build in different perceptions in addition to their individual personalities. The high placement of the emergency room indicates an access problem, similar to the all patients list.

TABLE 11

Active Duty Ranking
of Active Duty Specific Problems

Problem	Rj Total
1. Improve Emergency Room	82.5
2. Improve Appointment System	107.0
3. Improve Staff Attitude to Patients	109.0
4. Improve Pharmacy	131.5

Statistics	
Kendall W	.135
X^2	17.42
Xr^2	148.79
Rjs	31.55

X^2 and Xr^2 values are compared to a chi square table with df=3 and the value for α =.005 is 12.83.

The Kendall indicates the dependents of active duty did not use the same criteria to judge the problems but the judgments were significantly different. See table 12. Again, the need for physicians is significantly greater than any problem but pediatrics and staff attitude. Pediatrics holds a higher position with this group than the all patients list. No doubt, this is a result of the high pediatrics use by this group.

The dependents of active duty specific list is very similar to the general patient problem list, the emergency room is in place of the appointment system. See table 13. This association and significance was similar to the general patient problem list. The emergency room is placed high on the list. This is a main health care entry point for dependents but is

significantly more important than the other entry point, AMIC-GMC. The emergency room is a primary entry point on weekends and after duty hours and when appointments are full at AMIC-GMC and Pediatrics. There is a high potential for problems because people expect instant care for emergencies and are frustrated at using the emergency room because appointments are full.

TABLE 12

Dependents of Active Duty Ranking
of General Patient Problems

Problem	Rj Total
1. Need More Physicians	107
2. Improve Staff Attitude to Patients	146
3. Improve Pediatrics	151
4. Improve Pharmacy	168
5. Improve Appointment System	175
6. Improve AMIC-GMC	198
Statistics	
Kendall W	.131
X^2	30.38
Xr^2	30.42
Rja	52.0

X^2 and Xr^2 values are compared to a chi square table with df=5 and the value at α =.005 is 16.75.

TABLE 13

Dependents of Active Duty Ranking
of Specific Problems

Problem	Rj Total
1. Need More Physicians	107
2. Improve Emergency Room	148
3. Improve Pediatrics	162
4. Improve Staff Attitude to Patients	162
5. Improve Pharmacy	165
6. Improve AMIC-GMC	201

Statistics	
Kendall W	.131
X^2	29.48
Xr^2	39.39
Rjs	52.0

X^2 and Xr^2 values are compared to a chi square table with df=5 and the value at α=.005 is 16.75.

The retirees show the strongest association of any patient group. See table 14. This indicates their criteria for judging the problems is most similar of the patient groups. The differences among the problems are significant. The physician shortage is the most significant problem, more than any other. They find access to care a problem, though the appointment system is significantly more important than improving the clinic where the care is rendered. One may conclude the care is acceptable but access is not. The pharmacy is higher on the retirees' list than the all patients list. The retirees use the pharmacy more for refill drugs and civilian prescriptions; thus, have a greater chance for dissatisfaction because of exposure frequency. The reverse can be assumed for pediatric's low priority.

TABLE 14

Retirees and Theif Dependents Ranking
of General Patient Problems

Problem	Rj Total
1. Need More Physicians	94
2. Improve Appointment System	165.5
3. Improve Pharmacy	176.0
4. Improve Staff Attitide to Patients	193.5
5. Improve AMIC-GMC	230
6. Improve Pediatrics	275

Statistics	
Kendall W	.379
X^2	102.33
Xr^2	101.80
Rjs	56.97

X^2 and Xr^2 values are compared to a chi square table with df=5 and the value at α =.005 is 16.75.

Probably, the lower retiree W is caused by the retiree using a narrow, personal view of the specific problems. See table 15. The Xr^2 value indicates no significant differences between the Rj totals. Thus, the middle five problems are about the same and no conclusion about their individual importance may be drawn. The Rjs statistic does allow the conclusion that the physician shortage is more significant than any other problem and GYN is less significant than the first five.

TABLE 15

Retirees and Their Dependents Ranking
of Specific Problems

Problem	Rj Total
1. Need More Physicians	140.7
2. Provide Physical Exams to Retirees	222.2
3. Improve Dental Care	222.7
4. Improve Appointment System	224.2
5. Improve Pharmacy	225.0
6. Improve EENT Clinic	231.5
7. Improve GYN Clinic	295.7

Statistics	
Kendall W	.207
X^2	61.07
Xr^2	-110.0
Rjs	70.63

X^2 and Xr^2 values are compared to a chi square table with df=6 and the value at α =.005 is 18.54.

Problems ranked by the retiree council use are at table 16. The retiree council, a group of 14 retired officers and enlisted men, was addressed on the hospital's attempt to develop a prioritized problem list. The retiree specific problem list was presented to the council during their quarterly meeting. They were asked to prioritize the seven identified retiree problems. Their prioritization would be compared to the retirees.

The W value indicates the council is basing its rankings on similar criteria. The group has a preference for one problem over another.

TABLE 16

Retiree Council Ranking of
Retiree Specific Problems

Problem	Rj Total
1. Need More Physicians	22.5
2. Improve Appointment System	32.5
3. Improve Dental Care	49.5
4. Provide Physical Exams to Retirees	62.0
5. Improve EENT Clinic	65.5
6. Improve Pharmacy	68.0
7. Improve GYN Clinic	87.0

Statistics	
Kendall W	.548
X^2	36.55
Xr^2	36.40
Rjs	24.41

X^2 and Xr^2 values are compared to a chi square table with *df=6 and the value at* α *=.005 is 18.54.*

Unlike the retirees and their dependents, the council was able to prioritize problems with a specific order. This is very helpful to the hospital when all problems cannot be studied at one time. See table 17 for a comparison of the two groups. To evaluate if the retirees and retiree council perceive problems imilarly, a W test was performed using the problem order as rankings and the two groups as judges. The W value was .910 but the probability of the association occurring by chance was $.05 < p < .1$. The Xr^2 value was significant between $.05 < p < .1$. The association is high but the significance

TABLE 17

Comparison Between Retirees and
Retiree Council Ranking Retiree Specific Problems

RETIREES	RETIREE COUNCIL
1. Need More Physicians	1. Need More Physicians
2. Physical Exams for Retirees	2. Improve Appointment System
3. Improve Dental Care	3. Improve Dental Care
4. Improve Appointment System	4. Physical Exams for Retirees
5. Improve Pharmacy	5. Improve EENT Clinic
6. Improve EENT Clinic	6. Improve Pharmacy
7. Improve GYN Clinic	7. Improve GYN Clinic

is not equally high because only two judges were used.

It could be concluded that the retirees and retiree council rank problems similarly using approximately the same criteria and perceive like differences in problems. This conclusion could save considerable time allowing the council to speak for retirees. The risk would be making a type I error, assuming the retirees and council perceived the same when they did not. Problems would not be satisfactorily evaluated under this error. Prior to using the retiree council exclusively, more comparisons should be made between the council and retiree population on different health care matters.

The commanders did not use similar criteria to judge the problems. See table 18. This was not as believed because commanders are supposed to have similar problems. Evidently, this is not the case with health care.

TABLE 18

Commander's Ranking
of Commander Specific Problems

Problem	Rj Total
1. Improve Staff Attitude to Patients	67
2. Improve Profile & Quarters Limitation Instructions	73
3. Imitiate OB Service	86
4. Improve Pharmacy	94
Statistics	
Kendall W	.088
X^2	8.45
Xr^2	9.74
Rjs	27.21

X^2 is compared to a chi square table with df=3 and the value 8.45 equal to an α of .034.

Xr^2 is compared to a chi square table with df=3 and the value 9.74 equal to an α of .025.

There was significant difference between the first and last problem at p = .054. There was not as strong a significant difference between Rjs as imagined. Apparently, the myth, all commanders are the same, is just that, a myth. The commanders' first priority problem, attitude, probably comes from the hospital's insensitivity to their problems related to health care.

Table 19 recaps the patient problems ranking. Taking into consideration the different groups some problems are highlighted. Both active duty and dependents of active duty assigned a high priority to improving the emergency room. In the specific problem lists for each group, the active duty list had the emergency room ranked first and the dependent specific list had it

TABLE 19

General Patient Problems as Ranked by
Active Duty, Dependents of Active Duty, and Retirees and Their Dependents

	Problem	Rj Total
1.	Need More Physicians	305.2
2.	Improve Staff Attitude to Patients	477.2
3.	Improve Appointment System	477.7
4.	Improve Pharmacy	513.2
5.	Improve Pediatrics	567.2
6.	Improve AMIC-GMC	621.2

Rjs Value is 92.05

as second, behind needing more physicians. This would indicate that improving emergency room services could improve the active duty and dependent of active duty's perception of health care. It must be remembered that this area is a high use area after duty hours and weekends. It has a great potential for dissatisfaction as patients expect quick and sympathetic service at a location that is staffed to treat life-threatening emergencies. This area would be mentioned as a specific patient group problem.

Problem Prioritization - Staff

The staff was asked to prioritize problems in group discussions conducted as modified nominal groups. The staff groups were the same as the initial survey. The number of discussions held by group, the number of participants, and the percentage of the group participating follows. There was one group of twelve physicians, 42%. There was one group of eight administrators, 72.7%. There were two groups, five each of ancillary personnel, 13.7%. There were three groups, five each of registered nurses, 30.6%. There were four groups, five per group, of clerical personnel, 12.8%. Overall, there were

eighty-six personnel participating in the group discussions or 21.2% of the staff. The discussions were structured around an explanation of what the quality assurance program was, the problem orientation of the program, and how the group discussion would assist with problem prioritization. All groups participated with enthusiasm except the physicians. The physicians were interested in discussing hospital problems, their causes and solutions, but were not interested in prioritizing the problems identified by the staff. A summary of the physician conference is at the end of this section.

The staff uses similar criteria to judge problems. See table 20. There are significant differences between the problems in the staff's judgment.

TABLE 20

Staff Ranking of Hospital Problems

Problem	Rj Total
1. Reduce MD Shortage	135
2. Improve Patient-Staff Relations	187
3. Have a Walk-in Clinic	277
4. Reduce Pharmacy Waiting Time	292
5. Stop Abuse of the ER	297
6. Have an Evening Pediatric Clinic	346

Statistics	
Kendall W	.332
X^2	122.65
Xr^2	79.63
Rjs	67.13

X^2 and Xr^2 values are compared to a chi square table with df=5 and the value at α=.005 is 16.75.

Specifically the physician shortage and patient-staff relations problems are significantly different than the other problems. This indicates a strong preference to increase services and improve the patient-hospital contact. Having a walk-in clinic is significantly more important than having an evening pediatric clinic, yet both problems deal with access. The staff perceives pediatrics access acceptable when compared to the general adult population. Table 21 illustrates the significantly important problems by staff and individual staff group.

TABLE 21

Significant R_j Differences Among Problems Ranked by Hospital Staff

STAFF GROUP	PROBLEM 1 Evening Pediatric Clinic	2 Have a Walk-in Clinic	3 Improve Patient Relations	4 Reduce Physician Shortage	5 Reduce Pharmacy Waiting	6 Stop ER Abuse
Nurses				1,5		
Administration			1,6			
Ancillary			2	1,2,5,6		
Paramedical		1	1,5,6	1,2,5,6		
Clerical			1	1,2,5,6		
Staff as a Whole		1	1,2,5,6	1,2,5,6		

Interpretation of the chart is as follows: Nurses find problem 4 significantly more important at a p=.05 level than problems 1 and 5.

TABLE 22

Nurses Ranking of Hospital Problems

Problem	Rj Total
1. Reduce MD Shortage	28
2. Have a Walk-in Clinic	53
3. Improve Patient-Staff Relations	53
4. *Stop Abuse of the ER*	55
5. Have an Evening Pediatric Clinic	63
6. Reduce Pharmacy Waiting Time	63

Statistics	
Kendall W	.210
X^2	827.5
Xr^2	15.0
Rjs	30.02

X^2 is calculated from the s value (see Appendix M) and compared to a chart in Siegel, p. 286. The α =.01 value is 758.2. Any s value less than this has a greater than .01 probability of occuring by chance with the number of judges involved.

Xr^2 is compared to a chi square table with df=5 and a α =.005 value of 16.75.

The nurses' priorities are in close alignment with the staff's. See table 22. The W is less than the staff which indicates less agreement in judgment criteria. The possibility the judgment Rj totals are significantly different is between $.01 < p < .05$. Thus, the nurses' difference in problem priority is not as strong as administrators, ancillary, or paramedics. This may be traced to the traditional division of nursing priorities between clerical and administrative duties. The nurses place increasing access, through more physicians and having a walk-in clinic, ahead of improving relations, although not significantly. This reflects a clinical, patient contact orientation.

The administrators had a Kendall W of .416 which would indicate a stronger degree of association than the staff. See table 23. This suggests that

TABLE 23

Administrators Ranking of Hospital Problems

Problem	Rj Total
1. Improve Patient-Staff Relations	12
2. Have a Walk-in Clinic	26
3. Reduce Physician Shortage	27
4. Reduce Pharmacy Waiting Time	28
5. Have an Evening Pediatric Clinic	34
6. Stop Abuse of the ER	41

Statistics	
Kendall W	.416
X^2	466
Xr^2	16.64
Rjs	21.93

X^2 is calculated from the s value. See explaination on Table 22. Critical value is 442.

Xr^2 is compared to a chi square table with df=5 and a α =.005 value of 16.75.

administrators share a common set of criteria in judging hospital problems. The administrators saw the patient-staff relations as being significantly more important than the evening pediatric clinic or abuse of the emergency room. The administrators varied from the staff ranking by placing improvement of patient staff relations and having a walk-in clinic ahead of the physician shortage. The administrators' orientation to relations and access stems from being the focal point for answering patient complaints about the two problems. Their reality is no new physicians will be assigned until summer 1981, thus, work on those areas that can be improved. Human relations emphasis and changing the obstructive appointment system can reduce the administrators' complaint frequency. What is not considered by the administrator is the time required to treat the patient demand and its effect on physician effectiveness and morale.

The ancillary personnel had a Kendall W of .578 which is the strongest degree of association among the staff groups. See table 24.

Ancillary personnel differed from the staff in having a walk-in clinic. This problem was the last priority for ancillary personnel. The conceivable reason is a walk-in clinic will increase outpatient care which in turn will increase the need for ancillary services. The ancillary personnels' perception is that they are already overworked.

TABLE 24

Ancillary Personnel Ranking of Hospital Problems

Problem	Rj Total
1. Reduce MD Shortage	13
2. Improve Patient-Staff Relations	23
3. Stop Abuse of the ER	38
4. Reduce Pharmacy Waiting Time	42
5. Have an Evening Pediatric Clinic	45
6. Have a Walk-in Clinic	50

Statistics	
Kendall W	.578
X^2	1010.80
Xr^2	30.88
Rjs	24.51

X^2 is calculated from the s value. See explanation on Table 22. Critical value is 494.

Xr^2 is compared to a chi square table with df=5 and a α=.005 value of 16.75.

The paramedics' Kendall is .554. See table 25. This may appear high considering the diverse assignments (licensed practical nurses, emergency medical technicians, and nursing assistants) and that both military and civilian personnel occupy the positions. Yet, these individuals are usually the first hospital personnel a patient contacts in a clinical setting. Thus, these personnel receive the patients' initial reaction to any unmet perception and should have a good idea of patient problems. Their rankings match the staff as a whole.

TABLE 25

Paramedical Personnel Rankings
of Hospital Problems

Problem	Rj Total
1. Reduce MD Shortage	31
2. Improve Patient-Staff Relations	46
3. Have a Walk-in Clinic	69
4. Reduce Pharmacy Waiting Time	83
5. Stop Abuse of the ER	83
6. Have an Evening Pediatric Clinic	108

Statistics	
Kendall W	.554
X^2	3880.0
Xr^2	55.46
Rjs	35.52

X^2 is calculated from the s value. See explaination on Table 22. Critical value is 1022.2.

Xr^2 is compared to a chi square table with df=5 and α =.005 value of 16.75.

TABLE 26

Clerical Staff Rankings of Hospital Problems

Problem	Rj Total
1. Reduce MD Shortage	36
2. Improve Patient-Staff Relations	54
3. Reduce Pharmacy Waiting Time	73
4. Have a Walk-in Clinic	82
5. Stop Abuse of the ER	83
6. Have an Evening Pediatric Clinic	92

Statistics	
Kendall W	.317
X^2	2218.0
Xr^2	-10.82
Rjs	34.67

X^2 is calculated from the s value. See explaination on Table 22. Critical value is 1022.2.

Xr^2 is compared to a chi square table with df=5 and a α =.005 value of 16.75.

The clerical personnel have a W almost equal to the staff as a whole. See table 26. This is not unusual because clerical job diversity and different degrees of patient contact are as diverse as the staff. Unlike the staff, the clerical employees did not differ significantly in the preference for the problems. This may be attributed to their diversity. The group did express a significance for the physician shortage over the last four problems and improving relations over an evening pediatric clinic. This is very similar to the staff as a whole.

Summation of Physician Conference

The writer held a conference with twelve physicians to discuss quality assurance and prioritize identified problems. The conference began with a presentation about the history of quality assurance, Lyster Hospital's quality assurance plan, the role of the physician in quality assurance, and action being taken on a current problem, nursing service personnel performance during cardiopulmonary resuscitation. Emphasis was placed upon the importance of problem identification and prioritizing the identified problems. The physicians were briefed on the staff and patient survey technique and initial results. Like other staff members, they were asked to prioritize the six problem areas identified in the staff survey. These were: have an evening pediatric clinic; have a walk-in clinic; improve patient staff relations; reduce the physician shortage; reduce pharmacy waiting time; and stop abuse of the emergency room. The group dismissed reducing pharmacy waiting time as not being a problem. The group discussed the other five areas as being interrelated and almost inseparable. They saw the problem as patient demand versus physician supply and the motivation on the part of the patient and physician in the system. There is a great demand for care at Lyster Hospital. Statistically, there are approximately 200 visits a day to the Acute Minor Illness Clinic (AMIC) and 90 visits a day to the Emergency Room. These are the two initial entry clinics available at Lyster Hospital, the remaining clinics are by appointment only. One physician staffs the Emergency Room and five physicians staff the AMIC. The Emergency Room is never closed and the AMIC is open Monday through Friday from 0700 hours to 1530 hours.

The physicians did not consider the AMOSISTs as providers but advanced

screeners. The majority of the AMOSIST evaluated patients end up requiring a physician according to the group. Supervising the AMOSISTs and reviewing their work was thought almost more trouble than it was worth. Some of the physicians would like to see the program dropped.

The physicians desire to examine every patient as thoroughly as possible to determine the required treatment or further evaluation by another physician. This takes about 20 minutes when laboratory or radiology studies are required. If this much time is spent with each patient, then there is not enough time during the day to see all the patients who demand health care. Note that five physicians working eight hours and only seeing patients at 20-minute intervals can see 120 patients a day. This is eighty patients short of 200 patient demand. The Emergency Room could see approximately seventy patients a day at 20-minutes per patient. Thus, the physicians believe that they must spend less than optimal time to see each patient or see fewer patients. This situation is aggravated by those who abuse the system. These are the worried well and nonemergency or nonurgent patients who inappropriately use the hospital. The physicians believe that keeping these people out of the hospital would reduce the supply and demand problem.

The patient wants as much of the physician's time as possible to be reassured that treatment is complete and proper. The patient expects a short waiting time to see the physician. But there is more patient demand than physician supply. Thus, the patient waits for the evening or weekend to seek care because the demand is lower, the waiting time is shorter, and it is more convenient.

The physicians believe there is little motivation, save personal pride and professionalism, for treating as many patients as possible. Seeing as

many patients as rapidly as possible in the Emergency Room will only aggravate the problem. They believe that the shorter the waiting time is in the Emergency Room, the more people will use it because it is faster than the AMIC. If the physicians work too slow in the Emergency Room the truly sick patient may have to wait for treatment which could have severe effects, such as bacterial meningitis. They think they are in a no win situation.

In summary, the physicians believe that the most important problem is reducing patient demand. By accomplishing this reduction, the abuse of the Emergency Room, having an evening pediatric clinic, having a walk-in clinic and reducing the physician shortage will take care of themselves. These changes will improve patient staff relations by making care more available and aligning hospital and patient expectations about care.

Summation of Staff Problems

All staff groups had the same two problems of physician shortage and improving patient staff relations as significantly different from the other groups. Interestingly, only the administrators perceived improving patient-staff relations as the most important problem. While all the other groups felt the reducing the physician shortage was the most important. The difference in the two approaches could be that administrators do not directly interact with patients but with the results of patient complaints about the staff. The other groups meet daily with the patient and perceive the patient's problem as not enough care, not that the staff does not interact acceptably with the patients.

The staff identifies the shortage of physicians as the most important

problem facing the hospital. The next most important problem is improving patient staff relations. These two problems show significant differences ($p < .05$) to all other problems identified in most cases. The problem of not having a walk-in clinic is significantly more important by two groups than having an evening pediatric clinic: The walk-in clinic would rank below increasing physicians and improving relations. The problems of stopping abuse of the emergency room, reducing pharmacy waiting time, and having an evening pediatric clinic rate below the other three. The problems could be generally classified as most important: reducing the physician shortage and improving staff-patient relations; important: having a walk-in clinic; and not as important: stop abuse of the emergency room, reduce pharmacy waiting time, and having an evening pediatric clinic.

Inpatient Questionnaire Results

The staff and patient questionnaires identified only 8 of 158 problems relating to inpatient care. This low rate of five percent reinforces the need to separately question inpatients concerning their care. The patients discharged during December 1980 were mailed a questionnaire concerning their inpatient stay. Of the 155 questionnaires mailed 53 were returned, 34.2 percent.

The results at table 27 indicate high patient dissatisfaction with two specific operations, food service and housekeeping. Copies of specific comments about an area were made available to each department chief concerned: Patient Administration; Chief, Professional Services; Chief Nurse; Chief, Food Service; Chief, Service Branch; and, chiefs of the areas mentioned in general comments. The survey results were provided the quality assurance committee. The committee received a listing of negative comments by area

TABLE 27

Inpatient Questionnaire Results

AREA FOR COMMENT	Comment Frequency	Percent of Total Comments
Admissions & Dispositions Office	3	5.7
Physician Care	2	3.8
Nursing Care	3	5.7
Food Service	14	26.4
Room Appearance	16	30.2
Others Comments	9	17.0

Other comments include: Pharmacy 2, Radiology 2, Room assignments with smokers 2, Ambulance Transportation 1, Intercom 1, and Rude receptionist at pediatrics 1.

and the total number of positive and negative responses by area. This gave the committee a problem list and an evaluation of inpatient care from the patient's perspective. This information had not been available in the past and was useful to the committee for monitoring two problem areas.

The Chief, Food Service and Chief, Service Branch have made use of the results to improve their areas. The dietitian questions the patients about the condition of their food during her daily patient rounds. Previously, there had been no indication to her by patients of the food being unacceptable. The Chief, Service Branch was aware that less than optimal room cleanliness was performed. This was often linked to patient room changes and personnel shortages. In an effort to improve, the housekeeping individuals having room cleaning responsibility were assigned specific areas.

It is anticipated that this will improve the individuals' pride in their work and produce a cleaner room. However, until the personnel shortage is reduced the problem will probably continue.

The inpatient questionnaires will be distributed again during April and May 1981. The results of this questionnaire will be to evaluate performance and identify new problems for quality assurance. The questionnaires will be used on a semiannual basis, thereafter, to identify problems and evaluate performance.

Outpatient Questionnaires

The research methodology did not produce a separate outpatient questionnaire. Upon analysis, the research questionnaires solicited 150 of 158 problems in the outpatient area and 41 of 48 high performance comments in the outpatient area. This was felt to be sufficient input about outpatient care.

The US Army Health Services Command Outpatient Satisfaction Survey (OSSS) is designed to elicit such responses. See appendix O for a survey and instructions. However, it is not clinic specific. It is designed to elicit responses about the outpatient care provided at military hospitals without regard to a specific outpatient clinic. The OSS solicits input from outpatients visiting the hospital on a one-time, annual basis. To compare the OSS results with the survey questionnaire results it was assumed that a response of somewhat dissatisfied or very dissatisfied by an outpatient indicated a problem. The results of the OSS are at table 28.

For the OSS, problems identified by five percent (193 responses x .05 =

TABLE 28

US Army Health Services Command Outpatient Satisfaction Survey Results
Somewhat Dissatisfied or Very Dissatisfied Responses by Clinic

Evaluation Area	Diet	AMIC	GMC	Podiatry	X-Ray	EENT	Int Med	Peds	Physical Therapy	Mental Hygiene	Surgery	GYN	Immuno	Totals
Physician Care								2						2
Physician Assistant													1	1
Nurse Practitioner													1	1
Nurses														0
Enlisted Paramedics													1	1
Civilian Paramedics											1		1	2
AMOSISTS										1		2	1	4
Appointment Personnel	1		1					1				1	1	5
Medical Records Personnel										1		1		2
Receptionists													1	1
Laboratory Staff													1	1
Radiology Staff												1	3	4
Pharmacy Staff	1						1	3				4	2	11
Parking						1	1	1	1	1	1	1	2	9
Clinical Physical Facilities						1	1	1	2	1	1	1	1	9
Patient Privacy										1		1	1	3
Clinic Hours								2		2	1	1	2	8
Complaint Office							1			1	1		1	4
Instructions Received								1					1	2
Waiting Time for an Appointment	1		1			1	2	5		1		3	4	18
Waiting Time for Medical Records												1	1	2
Waiting Time Prior to Treatment								4				2	2	8
Waiting Time at Lab or X-ray					2			2			1	1	5	11
Waiting Time at Pharmacy	1	1	2	2	1		4	11	1	1	3	8	3	38
Waiting Time in Emergency Room					1		1	2	1		5	3	2	15

9.65 or 10) of the respondents will be considered significant. The project questionnaires used a ten percent identification response for placing the problem on a prioritization list. These problems and the percentage identification are: waiting time at the pharmacy, 19.7%; waiting time for an appointment, 9.3%; waiting time in the emergency room, 7.8%; waiting time at X-ray or laboratory, 5.7%, and the pharmacy staff, 5.7%. Comparison to the problems initially identified by the patient questionnaire is at table 29.

TABLE 29

Comparison of Problems Identified by
Outpatient Satisfaction Survey and Project Questionnaire

Problems-Survey	%	Problems-Questionnaire	%
Waiting Time for Pharmacy	19.7	Need More Physicians	34.4
Waiting Time for Appointment	9.3	Improve Pharmacy	33.6
Waiting Time in ER	7.3	Improve Staff Attitude	31.3
Waiting Time at X-Ray or Lab	5.7	Improve Appointment System	17.2
The Pharmacy Staff	5.7	Improve AMIC-GMC	15.6
		Improve Pediatrics	10.2

Both methods identify the pharmacy and the appointment system as problem areas for outpatients. The OSS identifies waiting time in two clinics as problems. The project identifies four other problems. The OSS would indicate the problem's importance by the percentage of negative comments. The project allows the patient to rank the problems in relation to one another. This is important as the priority changed after the second survey. This demonstrates that the initial ranking of a problem does not necessarily make it as important as another problem. For a discussion of this point, refer to the summary, this chapter.

What this demonstrates are some problems with the OSS. The survey limits patient input to the twenty five questions asked; it does not allow the relative importance of one problem to another to be compared; does not lend itself to specific clinic identification; and does not encourage patient initiated comments about the hospital. Another problem is the raw data is sent to Health Services Command for analysis. The January 1981 OSS results are ninety days old and have not been returned to Lyster Hospital. Thus, analysis by hand must be completed at the local hospital to have timely results.

The OSS does obtain a large sample size but does not seek opinions from the different population segments. Thus, the results could be biased because one group was more heavily sampled. This OSS received responses from 129 dependents of active duty, 38 retirees and their dependents, and 26 active duty. The dependents had a much larger input to the results. This biases the results to the dependents' perception of outpatient care. The project offers a patient originated problem, relative comparisons, and a timely method to obtain pertinent problem perceptions.

Comparison with Other Problem Identification Documents

Each military hospital is subject to inspections by outside agencies. These are the Inspector General, US Army Audit Agency, and JCAH. The results of these inspections should produce identified problems for the Quality Assurance Committee to use for improving patient care.

Although the agency's purpose may not be to identify specific patient care problems, any evaluation of the hospital as a whole entity must be able to identify problems influencing patient care. The 1980 HSC General Inspection, 1980 US Army Audit Agency report, and 1981 JCAH survey summation conference

were reviewed for similar problem identification to patient perceptions. If the same problems were identified then the patient survey technique would merely supplement the findings. However, if the patient surveys produced different problems then the project could be considered a good problem source.

The 1980 HSC General Inspection found fifty one findings which required action by the hospital. None of these findings were related to or coincided with problems identified by patients.

The 1980 US Army Audit Agency inspection at Lyster Hospital produced five major findings. None of these findings were related to the problems identified by the patient questionnaires.

The 1981 JCAH Accreditation Survey Summation Conference was reviewed for findings related to staff or patient questionnaire results. There were no findings that related to patient-staff identified problems.

What may be concluded is that the patient-staff questionnaire is a good tool to identify problems not discovered by outside inspecting agencies for use with the hospital's QA program.

Summary

The methodology was useful in allowing patients and staff to identify problems and rank them accordingly. Combined, the initial questionnaires identified approximately 155 problems. The problems most identified were not necessarily the problems with the highest priority. Table 30 lists the problems most identified by patients and staff with the priority assigned to the problem; and, helps illustrate that the frequency identification of a problem does not confirm its importance in relation to other problems.

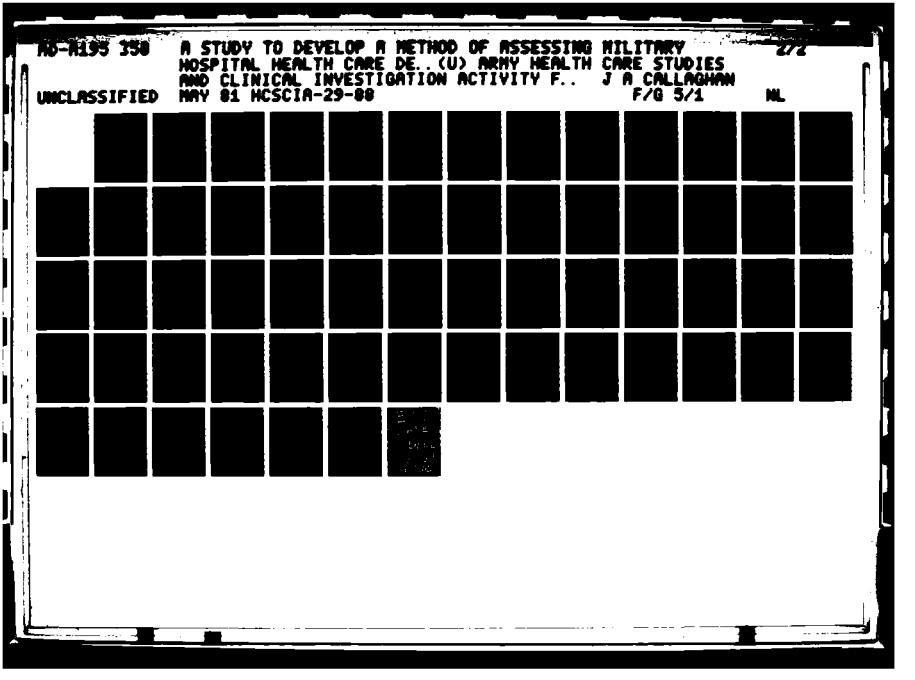
Both patients and staff rearranged the problems' importance when asked

to rank them against one another. The ranking allows certain statistical tests to be applied that reveal the degree of association and significance of one problem area over another. This is useful when resources limit the number of problems to be acted upon. The drawback to having problems prioritized is the additional time in preparing, mailing, and evaluating the questionnaires. For a hospital in a hurry to get a patient or staff problem list, the ranking phase may not be performed. However, the difference in initial frequency and final priority and the relative importance of one problem to another would indicate an advantage to prioritizing the problems.

TABLE 30

The Initial Frequency of a Problem
Compared to the Ranking by Patient and Staff Groups

Initial Frequency		Final Frequency
	Patients' Problems	
1	Need More Physicians	1
3	Improve Staff Attitude	2
4	Improve Appointment System	3
2	Improve Pharmacy	4
6	Improve Pediatrics	5
5	Improve AMIC-GMC	6
	Staffs' Problems	
3	Reduce the Physician Shortage	1
2	Improve Patient-Staff Relations	2
1	Have a Walk-in Clinic	3
5	Reduce Pharmacy Waiting Time	4
4	Stop Abuse of the ER	5
6	Have an Evening Pediatric Clinic	6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A STUDY TO DEVELOP A METHOD OF ASSESSING MILITARY
HOSPITAL HEALTH CARE DE.. (U) ARMY HEALTH CARE STUDIES
AND CLINICAL INVESTIGATION ACTIVITY F..
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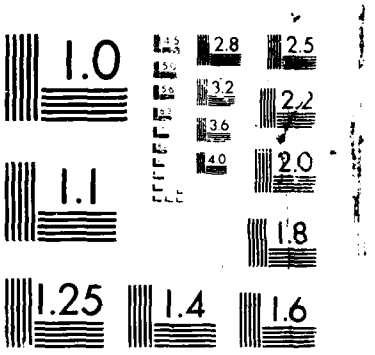


MICROCOPY RESOLUTION TEST CHART
NATIONAL BUREAU OF STANDARDS 1963

In using the questionnaires to identify hospital problems for the quality assurance committee, the approach was taken that no problem is insignificant, but many were omitted from further consideration. After the initial questionnaires had been evaluated, a problem list was presented to the quality assurance committee. All problems were listed showing the frequency and group that identified the problem. This allowed the committee to initiate action in those areas it deemed necessary. In the pharmacy, an independent study was initiated to determine the mean waiting time at half-hour segments. This would show peak usage times and allow the patient to be informed about those times. The pharmacist initiated a program to allow refills to be dropped off, similar to camera film developing, and picked up the next day. The Chief, Professional Services made changes in the AMIC-GMC to allow greater accessability to the clinic. Problems with the capability of being solved by the area or clinic supervisor were brought to their attention for correction.

The prioritized problem list was separated by patients and staff. Table 31 compares the two lists. The patients and staff selected the physician shortage as the most important problem. This problem was significantly different from all other patient problems and all staff problems except improving patient-staff relations. The second problem was improving patient-staff relations and improving staff attitude. The staff considered this problem significantly different from the other four problems, while patients considered it almost equal to improving the appointment system and not significantly different from improving the pharmacy. The staff considered having a walk-in clinic, reducing pharmacy waiting time, and stopping abuse of the ER almost equal. Having an evening pediatric clinic was almost

TABLE 31

Comparison of Patient and Staff Rankings
of Problems with Rj Totals and Significance Values

Patients	Rj Total	Staff	Rj Total
Need More Physicians	305.2	Need More Physicians	135
Improve Staff Attitude	477.2	Improve Patient-Staff Relations	187
Improve Appointment System	477.7	Have a Walk-in Clinic	277
Improve Pharmacy	513.2	Reduce Pharmacy Waiting Time	292
Improve Pediatrics	567.2	Have an Evening Pediatric Clinic	346
Improve AMIC-GMC	621.2		
Kjs Value = 92.05		Rjs Value = 67.13	

significantly different from those three. The patients considered improving pediatrics and improving the AMIC-GMC the last two problems. It must be noted that the patients identified the pediatric clinic with the highest frequency as a best performance area in the hospital. Taking this into consideration, the concentration in pediatrics should be on those specific items of dislike and a patient-staff education program toward this end.

This tells the quality assurance committee that patients and staff perceive the shortage of physicians and the associated limited services as the leading problem facing the hospital. Whether the shortage is in personnel assigned or in personal productivity will have to be determined prior to a problem resolution plan. In either case, the QA committee must work to have more physicians assigned or improve physician availability. Both groups identify improving patient-staff relations or staff attitude as the next most important problem. The quality assurance committee can have a great impact by actively promoting good patient relations as a high priority

activity and initiating an active staff-patient education program. This will be a long term program as attitudes do not change quickly. Improving the appointment system and having a walk-in clinic both reference accessability to care. The problem of improving the primary entry point for health care will not only reduce these problems but improve other identified problem areas such as improving AMIC-GMC, stopping abuse of the ER, and establishing an evening pediatric clinic. Improving the pharmacy and reducing pharmacy waiting time are fourth on both lists. This problem may have the best possibility for a quick fix since it involves one area and has high patient visibility. Consequently, an improvement will be experienced by more people and the hospital's potential good will from responding to a patient and staff problem quickly is excellent.

How the quality assurance committee decides to attack these problems and what order they choose cannot be dictated but the similarities between the patients and staff in problem identification and priority should not be ignored.

The observation that so few inpatient problems were identified by the random questionnaire should lead to a separate inpatient questionnaire for evaluation of inpatient functions. The results of this questionnaire are useful in identifying specific inpatient problems, such as food service and room cleanliness, and follow-up questionnaires can be useful evaluation tools.

For the quality assurance committee to learn about specific patient group preferences, the lists of patient specific problems were presented. See table 32. These lists showed a strong preference by active duty and

TABLE 32

Prioritized Problems From Specific Patient Groups

ACTIVE DUTY

Problem	Rj Total
Emergency Room	82.5
Appointment System	107
Staff Attitude	109
Pharmacy	135.1

Rjs Value 31.55

DEPENDENTS OF ACTIVE DUTY

Problem	Rj Total
Need More Physicians	107
Improve Emergency Room	148
Improve Staff Attitude to Patients	162
Improve Pediatrics	162
Improve Pharmacy	165
Improve AMIC-GMC	201

Rjs Value 52.00

RETIREES AND THEIR DEPENDENTS

Problem	Rj Total
Need More Physicians	140.7
Physical Exams for Retirees	222.2
Dental Care	222.7
Improve Appointment System	224.2
Improve Pharmacy	225.0
Improve EENT Clinic	231.5
Improve GYN Clinic	295.7

Rjs Value 70.63

dependents of active duty to improving the emergency room. This area is often the primary souce of care after normal hours and on weekends. It sees many nonemergency conditions which could be better treated during normal duty hours. Recalling the physicians' argument and the staff's perception of emergency room abuse, this area deserves some attention. The retirees appear very interested in gaining more services, such as physical exams and dental care. They seem satisfied with their primary entry sources, AMIC-GMC and ER, but want more service.

Overall, the type of problems identified lends itself to the structure approach to quality assurance. Neither patients nor staff appear to have any misgivings about the service rendered, the problem appears to be with its availability, accessability, and the process experienced to gain the service. This could indicate confidence in the hospital's ability or ignorance on the part of the patient and staff. The structural domination of the problem lists may indicate that the hospital is being judged on its hotel appearance, that is, the friendly, customer oriented staff approach in a clean adequate structure. Further research on this area of structure versus process evaluation may be necessary but should not delay the actions needed to correct identified problems.

In examining the groups for association and preference some observations were made. Table 33 indicates some groups have closer associations than others, the majority being hospital groups. These could be sampled in small numbers for problem prioritization; whereas, groups with small Kendall W's may require a larger sample to achieve a coherent ranking. It must be noted that all groups demonstrated a low probability $p < .01$ of the association being by chance. The high Kendall does not mean the judgment was correct but that the group used similar criteria to rank the problems.

It was interesting to note the retirees' high Kendall for general hospital problems. If this problem ranking is a good indicator, retirees use the same criteria to evaluate problems. Thus implementing a change suggested by retirees can be expected to have a positive impact on a large segment of the supported population.

TABLE 33

Kendall W for Groups Ranking General Problems

GROUP	KENDALL W
Ancillary Personnel	.578
Paramedical Personnel	.554
Administrators	.416
Retirees and Their Dependents	.379
Staff as a Group	.332
Clerical Personnel	.317
Nurses	.210
Patients as a Group	.170
Active Duty	.166
Dependents of Active Duty	.135
Commanders	.088

III

CONCLUSION

The purpose of this project was to test a method for developing a problem list using patient and staff perspectives to be used in the hospital's quality assurance program. It involved the random sampling of patients and staff, evaluating responses, and asking the patients and staff to rank those problems with high initial frequency. The list was to be a useful tool for the hospital's quality assurance program.

The project did develop useful problem lists for Lyster Hospital's Quality Assurance Committee. The list was used by the committee to pinpoint problems, verify suspicions, and evaluate performance. The method's strengths are the problem picture developed from the staff and patient viewpoint and the relative importance among problems. The list of best performance areas provides a good rating of where the patient and hospital have a good mesh of expectation and performance. The methodology is not expensive but does consume about eighty hours. See appendix N. More time would have been involved if the response were greater. The methodology does have drawbacks. The process takes approximately ten to twelve weeks from start to finish. Eight weeks must be allowed for the two mailings. This could be reduced by only using one mailing for problem identification or hospital picked problem ranking. This may be a consideration when one observes the similarities between the staff and patient final ranked problems. However, the total problems identified in the initial mailing, approximately 155 would not be available. If the problems are not prioritized, the chance increases that the most important problem will not be given proper attention. It is recommended to have both mailings to gain full advantage of the methodology.

Most of all, the methodology requires the support of the QA committee.

The committee has the prerogative to act and to initiate action to resolve identified problems. Without this support, the hospital's quality assurance program will not have the staff's support and become an exercise in place of an active problem-focused, result-oriented program.

The methodology has potential for use as an annual evaluation of hospital performance and quality assurance progress. It can be an effective public relations tool to enhance the hospital's image through community and staff involvement with hospital planning.

The problems uncovered by the methodology were more extensive and meaningful than the Health Services Command Outpatient Satisfaction Survey. The problems discovered by the Health Services Command Annual General Inspection, US Army Audit Agency, and JCAH Accreditation Survey did not relate to particular staff perceived problems with health care delivery. Thus, it is a useful tool to supplement outside inspecting agencies.

Overall, the method is a good tool for problem identification, prioritization, and performance evaluation in the perspective of staff and patients.

APPENDIX A

DEFINITIONS

APPENDIX A

DEFINITIONS

Civilian Health and Medical Program for the Uniform Services (CHAMPUS)--a cost sharing program that assists Army personnel with civilian medical bills.

Health Services Command Annual General Inspection -- Army team which inspects Army hospitals for compliance with regulations and directives.

Health Services Command (HSC) --The US Army headquarters with responsibility for operation of all Army hospitals in the United States and Panama.

Quality Assurance (QA) -- a program designed to evaluate the appropriateness and quality of medical care services.

United States Army Reserve/United States Army National Guard (USAR/USANG) -- the nonactive duty component of the US Army.

APPENDIX B

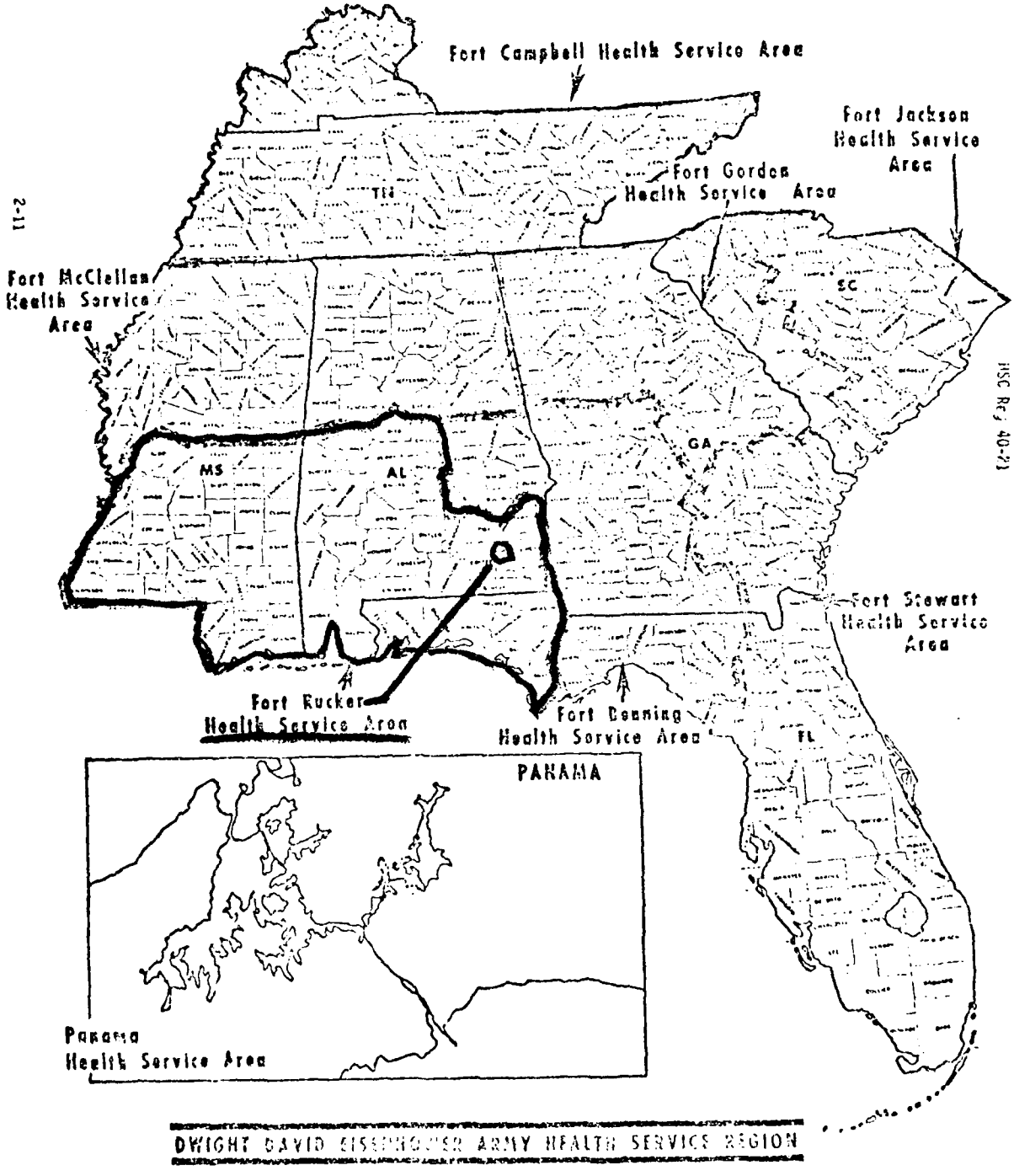
FORT RUCKER HEALTH SERVICES AREA

DEPARTMENT OF THE ARMY
HEADQUARTERS, UNITED STATES ARMY HEALTH SERVICES COMMAND
Fort Sam Houston, Texas 78234

Regulation
40-21

23 June 1980

HEALTH SERVICE REGIONS AND HEALTH SERVICE AREAS



DWIGHT DAVID EISENHOWER army HEALTH SERVICE REGION

2-11

HSC Reg 40-21

APPENDIX C

MILITARY SPECIALITIES AND CIVILIAN JOB CODES

Appendix C

Provider Segmentation	Specialty Skill Identifier	Military Occupational Specialty	Civilian Job Position/Code
Physicians	60,61		602,662
Nurses	66		610
Administrators	67		560
Ancillary Personnel	68	91F,G,J,N,P,Q 92B,94F	185,186,636 645,646,647 649,660,661 699,5213,7402 7404,7407
Paramedical		91B,C,D,H,P,Q,U, 91Y	621,622
Clerical and Support		51P,71B,G,L; 75C,Z; 76J	303,305,318,322 334,343,344,356 357,501,510,669 675,525,679,856 962,998,1411 2005,3566, 4805,5703,6907 7408

Civilian Job Positions by

General Schecule

185 - Social Worker
186 - Social Service Assistant
303 - Admin Support Clerk
305 - Mail Clerk
318 - Secretary
322 - Clerk Typist
334 - Computer Specialist
343 - Management Analyst
344 - Management Assistant
356 - Data Transcriber
357 - Coding Clerk
501 - Budget Clerk
510 - Auditor
525 - Accounting Technician
560 - Budget Analyst
602 - Physician
610 - Nurse
621 - Nurse Assistant
622 - Medical Aid (CMS)
636 - Physical Therapy
644 - Medical Technologist
645 - Medical Technician
646 - Histopath Technician
647 - Radiology Technician
649 - Medical Machine Technician
660 - Pharmacist
661 - Pharmacy Technician
662 - Optometrist
669 - Medical Records Librarian
675 - Medical Records Technician
679 - Medical Clerk
681 - Dental Assistant
682 - Dental Hygienist
683 - Dental Lab Technician
684 - Public Health Dental Hygienist
699 - Emergency Medical Technician
856 - Electronics Technician
962 - PEB/CHAMPUS Contact Rep
998 - Claims Clerk
1411 - Librarian
2005 - Supply Clerk

Wage Grade

3111 - Not authorized
3502 - Not authorized
3566 - Janitor
4805 - Medical Equipment Repair
5212 - Laboratory Worker
5703 - Motor Vehicle Operator
6907 - Warehouse Worker
7402 - Cook
7404 - Cook Leader
7407 - Meatcutter
7408 - Food Service Worker

APPENDIX D

HOSPITAL STAFF QUESTIONNAIRE

DA FORM 2496

For use of this form, see AR 340-15; the proponent agency is TAGCEN.

REFERENCE OR OFFICE SYMBOL	SUBJECT
ATZQ-AAMC-CS	S: 23 Jan 81 Quality Assurance Questionnaire

TO Each Staff Member FROM Chief of Staff, USAAMC DATE CMT 1

1. Definitions:

a. QUALITY ASSURANCE: A well defined program designed to enhance patient care through an ongoing objective assessment of the important aspects of patient care and the correction of identified problems.

b. JOINT COMMISSION ON THE ACCREDITATION OF HOSPITALS (JCAH): An organization composed of the American College of Surgeons, the American College of Physicians, the American Hospital Association, and the American Medical Association. The commission accredits hospitals that meet high health care delivery standards by comparing performance against established criteria in all hospital areas that contribute to good patient care: safety, building, equipment, personnel, and administration.

2. During 1979, the JCAH changed its requirements for the health care Quality Assurance Program. The change required hospitals to have a program that continually assessed quality and corrected identified problems. Before the change, the JCAH Quality Assurance Program was based almost solely on medical record audits and committee meetings. Now the program is to be hospital specific and problem oriented. The new JCAH requirements require active staff participation in the Quality Assurance Program to be successful.

3. This staff survey will be conducted in two parts.

a. Part I will be staff identification of inpatient and outpatient hospital procedures or areas needing improvement. The identified areas or procedures will be grouped by how often they are identified (frequency). A list will be developed with the most identified problems to the least identified. This list will be used in Part II.

b. Part II will have different staff groups prioritize the identified problems. This will be done in small group meetings. Because of the staff's size, not everyone will be able to participate in these group meetings. If you are interested in participating in these meetings, please contact Major Callaghan, 2316, by phone, buck slip, or drop by room Y106.

c. The hospital Quality Assurance Committee will use the prioritized list in combination with a similar list being developed from the population supported's input to have a single hospital problem list. The list will be used for long and short range planning, improvement of patient care, and improvement of hospital working conditions.

4. Return the attached survey to Major Callaghan not later than 23 January 1981.

1 Incl
as

DONALD L. NAYLOR
COL, MSC
Chief of Staff

DA FORM 2496 REPLACES DD FORM 96, WHICH IS OBSOLETE.

☆GPO-1975-665 422/1063

TO: Major Callaghan 103
Room Y106, Hospital Headquarters

fold to here

Lyster US Army Community Hospital
Quality Assurance Program
Staff Questionnaire

If I had the authority, what two actions would I direct the hospital to take to improve patient care. Remember that patient care includes in-patients and outpatients. Consider that health care includes all the people, facilities, equipment, and administrative procedures necessary to appoint, give, and record patient care.

1.

2.

Survey Grouping Information

Military: MOS_____

Civilian: Job Title_____

_____
signature optional

Please fold to the line and return.

Encl 1

APPENDIX E

QUESTIONNAIRE FOR ACTIVE DUTY, DEPENDENTS OF ACTIVE DUTY, AND RETIREES AND THEIR DEPENDENTS

DEPARTMENT OF THE ARMY

HEADQUARTERS UNITED STATES ARMY AEROMEDICAL CENTER
FORT RUCKER, ALABAMA 36362

ATZQ-AAMC-ZA

Dear

Lyster US Army Community Hospital is vitally interested in providing the best possible health care to all our beneficiaries in the Fort Rucker community. My staff is working very hard to insure that you receive health care of the highest quality. I would appreciate your evaluation of how well we are doing.

Please complete the inclosed questionnaire and return it in the envelope provided. When all the questionnaires are returned a problem list will be developed. A second questionnaire will then be sent to you asking that you rank these problems from most serious to least serious. Your rankings will be used by the hospital's Quality Assurance Committee to assign projects aimed at correcting the problems.

Thank you for your support in this matter of paramount concern to us all.

Sincerely,

Robert J. Kreutzmann M.D.

1 Incl
as

ROBERT J. KREUTZMANN, M.D.
COL, MC
Commanding

Lyster US Army Community Hospital
Quality Assurance Program
Health Services Questionnaire

Please complete the following questionnaire about Lyster US Army Community Hospital. Answer the questions as best you can. Your answers will be used to develop a problem list for the hospital's Quality Assurance Program. Remember that the hospital includes all the people that work there, the clinics, wards, and the buildings used to give health care. You may be as specific as you wish.

1. What three health care services does the hospital do best?

   a.

   b.

   c.

2. What three health care areas need improvement?

   a.

   b.

   c.

_____
signature optional

Treatment Eligibility Status:

Active Duty_____

Spouse of Active Duty, Retired, or Deceased_____

Retired_____

APPENDIX F

QUESTIONNAIRE FOR COMMANDERS

DEPARTMENT OF THE ARMY

HEADQUARTERS UNITED STATES ARMY AEROMEDICAL CENTER
FORT RUCKER, ALABAMA 36362

ATZQ-AAMC-ZA

SUBJECT: Health Services Questionnaire

1. The US Army Aeromedical Center has been working very hard to overcome the physician shortage experienced this summer. Recently we were successful in having two more physicians assigned. We know there are shortfalls in specialty areas such as orthopedics; obstetrics; ear, nose, and throat; and dermatology. We are actively recruiting these specialists and are optimistic that most, if not all of them, will complement our staff by this summer.

2. There are other areas in our health care delivery system that require attention. We are aware of many of these areas; however, we need your assistance in identifying those health care areas wherein improvement would enable us to provide better support to your unit. We are also soliciting comments from our staff, inpatients, members of the community, and retirees.

3. The attached questionnaire should be completed and returned to the Aeromedical Center. After these questionnaires are returned, a list will be compiled of those areas most identified by commanders. You will be furnished a copy of this list and asked to prioritize it. The prioritized list will be used by the hospital's Quality Assurance Committee to initiate resolutions to the areas of concern.

4. I appreciate your time in completing this questionnaire. It will serve as a valuable input source for refinement of the health services we provide.

Robert J. Kreutzmann, MD

1 Incl
as

ROBERT J. KREUTZMANN, M.D.
COL, MC
Commanding

Lyster US Army Community Hospital
Quality Assurance Program
Commanders' Health Services Questionnaire

1. What area or service does the Aeromedical Center perform best in supporting your unit?

2. What two areas or services can the Aeromedical Center change or add to better support your unit?

a.

b.

_____
signature optional

Remember that health services support includes all the people, material, facilities, and administration associated with the Aeromedical Center.

APPENDIX G

QUESTIONNAIRE FOR RETIREE COUNCIL MEMBERS

DEPARTMENT OF THE ARMY
HEADQUARTERS UNITED STATES ARMY AEROMEDICAL CENTER
FORT RUCKER, ALABAMA 36362

ATZQ-AAMC-CS

Dear

Lyster US Army Community Hospital is conducting an aggressive information program aimed at gathering perceptions about patient health care delivery. Active duty personnel, their dependents, hospital staff, unit commanders, and retirees are being surveyed. The initial survey asks individuals to identify strengths and weaknesses of the health care delivery system. A second survey will ask the same individuals to prioritize the most identified problems. This will give the hospital a prioritized list by different population served categories. The list will be used by the hospital's Quality Assurance and Executive Committee to plan and to initiate actions aimed at correcting the problems. The result should be improved health care delivery for the community.

As a retiree council member you are in a special position of knowledge and interest. In addition to the one hundred fifty retirees being surveyed, it would be very useful to have you complete the inclosed questionnaire. A return envelope has been provided.

It is anticipated that the responses from all retirees will be received prior to your next meeting. If so a list will be furnished your council for discussion and prioritization. If not, a problem list will be sent to you for prioritization.

Your time in assisting the hospital with this undertaking is greatly appreciated.

John A. Callaghan

1 Incl
as

JOHN A. CALLAGHAN
MAJ, MSC
Project Officer

Lyster US Army Community Hospital
Quality Assurance Program
Health Services Questionnaire

Please complete the following questionnaire about Lyster US Army Community Hospital. Answer the questions as best you can. Your answers will be used to develop a problem list for the hospital's Quality Assurance Program. Remember that the hospital includes all the people that work there, the clinics, wards, and the buildings used to give health care. You may be as specific as you wish.

1. What three health care services does the hospital do best?

   a.

   b.

   c.

2. What three health care areas need improvement?

   a.

   b.

   c.

_____
signature optional

Treatment Eligibility Status:

Active Duty_____

Spouse of Active Duty, Retired, or Deceased_____

Retired_____

APPENDIX H

INPATIENT QUESTIONNAIRE

DEPARTMENT OF THE ARMY

HEADQUARTERS UNITED STATES ARMY AEROMEDICAL CENTER
FORT RUCKER, ALABAMA 36362

ATZQ-AAMC-ZA

You or a member of your family was recently hospitalized at Lyster US Army Community Hospital. To help us maintain and improve our medical care I would like you to complete the attached questionnaire. It will be used to develop a list of hospital areas our patients believe deserve attention. Action on these areas will be by the hospital's Quality Assurance Committee. Your response is important to our understanding how well we perform. A return envelope has been enclosed for your convenience.

Sincerely,

Robert J. Kreutzmann, MD

2 Incl
1. Questionnaire
2. Envelope

ROBERT J. KREUTZMANN, M.D.
COL, MC
Commanding

Lyster US Army Community Hospital
Quality Assurance Program
Inpatient Questionnaire

Please write your comments, either good or bad, about the following areas:

Admission and Discharge Office:_____

_____

_____

Doctor's Care:_____

_____

_____

Nursing Staff Care:_____

_____

_____

Food Service:_____

_____

_____

Condition of your room and the hospital:_____

_____

_____

General Comments:_____

_____

_____

_____
signature optional

Please place this questionnaire in the enclosed envelope and mail it to the hospital.

APPENDIX I

QUESTIONNAIRE FOR PRIORITY RANKING - ACTIVE DUTY

DEPARTMENT OF THE ARMY
HEADQUARTERS UNITED STATES ARMY AEROMEDICAL CENTER
FORT RUCKER, ALABAMA 36362

ATZQ-AAMC-CS

Thank you for answering our first questionnaire. If you were not able to for one reason or another, here is your chance to give our hospital some advice. Attached is a second questionnaire which lists the problem areas most identified on the first questionnaire. Please complete and return it in the self-addressed envelope provided.

Your compliments have been passed appropriately to my staff. These kind remarks are greatly appreciated and very important to us--so often only the negative comments reach us.

The areas that you identified as requiring improvement which are not listed on this questionnaire will be reviewed by my Executive Committee and the hospital area supervisor to which they apply.

Thank you for your participation in this project. If you have other comments about our hospital, please feel free to write or talk with my staff, our Patient Affairs Officer, or your representative on the Health Consumer Committee.

Sincerely,

Robert J. Kreutzmann, MD

1 Incl
as

ROBERT J. KREUTZMANN, M.D.
COL, MC
Commanding

LYSTER US ARMY COMMUNITY HOSPITAL
Quality Assurance Program
Health Services Questionnaire
Active Duty

The following areas were the most identified by active duty soldiers in the initial questionnaire as requiring improvement. Please rank these areas in the order of their importance to you. (1 = Highest, 2 = Next Highest, and so on.)

Appointment System _____

Emergency Room _____

Pharmacy _____

Staff Attitude to Patients _____

The following areas were the most identified by all respondents (soldiers, dependents, and retirees) in the initial questionnaire as needing improvement. Please rank these areas in the order of their importance to you. (1 = Highest, 2 = Next Highest, and so on.)

Appointment System _____

AMIC-GMC _____

More Physicians Needed _____

Pediatrics _____

Pharmacy _____

Staff Attitude to Patients _____

PLEASE RETURN THIS QUESTIONNAIRE IN THE ENCLOSED ENVELOPE.

_____
Signature Optional

APPENDIX J

QUESTIONNAIRE FOR PRIORITY RANKING - DEPENDENTS OF ACTIVE DUTY

DEPARTMENT OF THE ARMY
HEADQUARTERS UNITED STATES ARMY AEROMEDICAL CENTER
FORT RUCKER, ALABAMA 36362

ATZQ-AAMC-CS

Thank you for answering our first questionnaire. If you were not able to for one reason or another, here is your chance to give our hospital some advice. Attached is a second questionnaire which lists the problem areas most identified on the first questionnaire. Please complete and return it in the self-addressed envelope provided.

Your compliments have been passed appropriately to my staff. These kind remarks are greatly appreciated and very important to us--so often only the negative comments reach us.

The areas that you identified as requiring improvement which are not listed on this questionnaire will be reviewed by my Executive Committee and the hospital area supervisor to which they apply.

Thank you for your participation in this project. If you have other comments about our hospital, please feel free to write or talk with my staff, our Patient Affairs Officer, or your representative on the Health Consumer Committee.

Sincerely,

Robert J. Kreutzmann, M.D.

1 Incl
as

ROBERT J. KREUTZMANN, M.D.
COL, MC
Commanding

LYSTER US ARMY COMMUNITY HOSPITAL
Quality Assurance Program
Health Services Questionnaire
Nonactive Duty

The following areas were the most identified by nonactive duty people in the initial questionnaire as requiring improvement. Please rank these areas in their order of importance to you. (1 = Highest, 2 = Next Highest and so on.)

AMIC-GMC _____

Emergency Room _____

More Physicians Needed _____

Pediatrics _____

Pharmacy _____

Staff Attitude to Patients _____

The following areas were the most identified by all questionnaire recipients: active duty, nonactive duty, and retirees. Please rank these areas in their order of importance to you. (1 = Highest, 2 = Next Highest, and so on.)

Appointment System _____

AMIC-GMC _____

More Physicians Needed _____

Pediatrics _____

Pharmacy _____

Staff Attitude to Patients _____

PLEASE RETURN THIS QUESTIONNAIRE IN THE ENCLOSED ENVELOPE.

_____
Signature Optional

APPENDIX K

QUESTIONNAIRE FOR PRIORITY RANKING - RETIREES & THEIR DEPENDENTS

DEPARTMENT OF THE ARMY
HEADQUARTERS UNITED STATES ARMY AEROMEDICAL CENTER
FORT RUCKER, ALABAMA 36362

ATZQ-AAMC-CS

Thank you for answering our first questionnaire. If you were not able to for one reason or another, here is your chance to give our hospital some advice. Attached is a second questionnaire which lists the problem areas most identified on the first questionnaire. Please complete and return it in the self-addressed envelope provided.

Your compliments have been passed appropriately to my staff. These kind remarks are greatly appreciated and very important to us--so often only the negative comments reach us.

The areas that you identified as requiring improvement which are not listed on this questionnaire will be reviewed by my Executive Committee and the hospital area supervisor to which they apply.

Thank you for your participation in this project. If you have other comments about our hospital, please feel free to write or talk with my staff, our Patient Affairs Officer, or your representative on the Health Consumer Committee.

Sincerely,

Robert J. Kreutzmann, MD

1 Incl
as

ROBERT J. KREUTZMANN, M.D.
COL, MC
Commanding

LYSTER US ARMY COMMUNITY HOSPITAL
Quality Assurance Program
Health Services Questionnaire
Retirees

The following areas were the most identified by retirees in the initial questionnaire as requiring improvement. Please rank these areas in the order of their importance to you. (1 = Highest, 2 = Next Highest, so on, 7 = Lowest.)

Appointment System _____

Dental Care _____

EENT Clinic _____

Gyn Clinic _____

More Physicians Needed _____

Pharmacy _____

Physical Exams for Retirees _____

The following areas were the most identified by all recipients (active duty, dependents of active duty, and retirees) in the initial questionnaire. Please rank these areas in the order of their importance to you. (1 = Highest, 2 = Next Highest, and so on.)

Appointment System _____

AMIC-GMC _____

More Physicians Needed _____

Pediatrics _____

Pharmacy _____

Staff Attitude Toward Patients _____

PLEASE RETURN THIS QUESTIONNAIRE IN THE ENCLOSED ENVELOPE.

_____
Signature Optional

APPENDIX L

QUESTIONNAIRE FOR PRIORITY RANKING - COMMANDERS

DEPARTMENT OF THE ARMY
HEADQUARTERS UNITED STATES ARMY AEROMEDICAL CENTER
FORT RUCKER, ALABAMA 36362

ATZQ-AAMC-CS

Our initial Health Services Questionnaire identified several areas where our performance does not meet commander's expectations. The areas identified most often are on the attached questionnaire for your personal ranking. Your ranking will influence the order in which my staff will take action to change our health care delivery. Identified problem areas not listed on this questionnaire will be reviewed by my Executive Committee for subsequent action.

I want to personally thank those of you who completed the initial questionnaire. Even if you did not complete it, please take the time to complete this one. Thank you for your support in this project.

Sincerely,

Robert J. Kreutzmann, MD

1 Incl
as

ROBERT J. KREUTZMANN, M.D.
COL, MC
Commanding

LYSTER US ARMY COMMUNITY HOSPITAL
Quality Assurance Program
Health Services Questionnaire
Commanders

The following areas were the most identified by commanders in the initial questionnaire as needing improvement. Please rank these areas in their order of importance to you. (1 = Highest, 2 = Next Highest, and so on.)

Initiate OB Service _____

Pharmacy Service _____

Profiles/Quarters Instructions
on Sick Slips
Should be Clearer _____

Staff Attitudes Toward
Patients _____

PLEASE RETURN THIS QUESTIONNAIRE IN THE ENCLOSED ENVELOPE.

_____
Signature Optional

APPENDIX M

STATISTICS

Appendix M

Statistical Methods

Kendall Coefficient of Concordance: W

The W is a useful statistic to measure the association between judges ranking the same items. For example, let table 34 display three independent rankings of four problems.

Table 34

Sample Calculation of W

	Problem (N)			
Judge(k)	A	B	C	D
X	3	4	2	1
Y	2	4	3	1
Z	3	4	1	2
Rj	8	12	6	4

If all the judges had agreed on each problem the rankings would be the same and the Rj values would be multiples of k; k, 2k, 3k. On the other hand, if the judges had no agreement, then one would expect the Rj values to be about equal. The W is a measurement of the divergence of the actual agreement shown in the data from the maximum possible perfect agreement.[1]

The formula is $$W = \frac{s}{1/12\ k^2\ (N^3 - N)}$$

s = Sum of the squares of the observed deviations from the mean Rj

k = Number of judges

N = Number of items being judged

$1/12\ k^2\ (N^3 - N)$ = Maximum possible sum of the squared deviations, sum of s with perfect agreement.

Computation of Sample

$$s = (8 - 7.5)^2 + (12 - 7.5)^2 + (6 - 7.5)^2 + (4 - 7.5)^2$$

$$s = 35$$

$$W = \frac{35}{1/12\ (3)^2\ (4^3 - 4)}$$

$$W = \frac{35}{45}$$

$$W = .778$$

W = .778 expresses the degree of association among the three judges.

To test the significance of W, one can determine the probability associated with the occurence under a H_0 of a value as large as the s with which it is associated. If one obtains the sampling distribution of s for all permutations in the N ranks, in all possible ways in the k rankings, one will have $(N!)^k$ sets of possible ranks. Using this, the null hypothesis that k sets of rankings are independent by taking from this distribution the probability associated with the occurrence under H_0 of a value as large as an observed s may be tested.[2]

The null hypothesis is: The judges rankings are unrelated. The alternate hypothesis is the rankings are related. To compute this, the table in Siegel[3] may be used for small values of k and N or a chi square table may be used for large values of N and k. The formula is

$$X^2 = k(N-1)W$$

Using the sample X^2 calculation

$$x^2 = k\,(N-1)\,W$$

$$x^2 = 3(4 - 1)\,.778$$

$$x^2 = 7.002$$

$$df = N-1$$

$$df = 3$$

The probability of H_0 occurrance is $.1 > p > .05$. This enables the H_0 to be rejected at those levels. It may be concluded that the judges' rankings were related at the level of confidence $.1 > p > .05$.

Another method of determining the rankings is to compare the Rj^4s. Kendall suggests this to be the best estimate when W is significant. If one accepts the criteria that the judges have agreed, then the Rj^4s will give the order of importance.

When asking judges to rank items the possibility exists that some judges will rank items equally. The W calculation is slightly modified to accommodate these ties.

$$W = \frac{s}{1/12\ k^2\ (N^3 - N) - k \sum_t T}$$

$$T = \frac{(t^3 - t)}{12}$$

t = represents the number of tied items

Example: In the ranking of general patient problems by active duty personnel, four individuals ranked one or more problems equally. To calculate the T, the number of ties are calculated:

$$T_1 = \frac{(2^3 - 2) + (3^3 - 3)}{12} = 2.5$$

In this example the judge has given two items equal value and three other items equal value

$$T_2 = \frac{(2^3 - 2) + (3^3 - 3)}{12} = 2.5$$

$$T_3 = \frac{(5^3 - 5)}{12} = 10$$

$$T_4 = \frac{(2^3 - 2)}{12} = .5$$

The total T value is 15.5.

To complete W

$$W = \frac{4971.5}{1/12\ (42)^2\ (6^3 - 6) - (42)\ (15.5)}$$

$$W = .165$$

Note that the W will be depressed when the normal formula is applied in place of the formula for ties.

A program was developed to allow the s, Rj, and W to be calculated by computer. The program is at the end of this Appendix. When ties occurred or the X^2 value was computed, this was not performed on the computer.

In summary, to compute W

a. Let N = the number of problems and k = the number of judges.

b. Place the rankings in an kxN table.

c. Determine the Rj for each N.

d. Determine the mean Rj.

e. Compute s by computing the deviations between Rj and the mean Rj. Square these deviations and add them together.

f. Compute W using the formula with or without ties.

g. Determine if the observed value of W is significantly different from zero by using the formula to compute an X^2 value with df = N-1.

Friedman Two-Way Analysis of Variance

This statistic will be used to test the null hypothesis that there is no difference in the preference of all the judges for any problem being more important than another. The statistic shows whether the rank totals (Rj) differ significantly. The formula is

$$X_r^2 = \frac{12}{kN(N+1)} \sum_{j=1}^{N} (Rj)^2 - 3k(N+1)$$

k = the number of judges

N = the number of problems

Rj = the sum of the rankings by all judges on a particular problem

Using the sample at table 30

$$X_r^2 = \frac{12}{(3)(4)(5)} \left(8^2 + 12^2 + 6^2 + 4^2\right) - 3(3)(5)$$

$$= \frac{12}{60} (260) - 45$$

$$= 7$$

Using the table Ob in Daniel gives a value p = .054, N = 4, and K = 3. When the values of K and N exceed the tables in Daniel a chi square table is used with N-1 degrees of freedom. Thus, the probability that H_0 is valid is $\leq .054$. The conclusion may be made that the judges did not select the problems' importance at random but had a definite preference for one problem over another, at the level of significance calculated.

To test whether one Rj differs significantly from another Rj in the same group of judges, a multiple comparison test is performed. This test will determine the numerical significant difference between the Rj's.[4]

The formula is

$$R_i - R_j \geq Z\sqrt{\frac{k\,(N)\,(N+1)}{6}}$$

where

$= R_i - R_j$ is the difference between any two Rj's.

$Z = \frac{\alpha\,(\text{level of confidence})}{N\,(N-1)}$

k = number of judges

N = number of items being ranked

Using the sample in table 34 the following calculation is made

$$\frac{\alpha = .05}{4\,(3)} = .004$$

.004 = Z value of 2.65

$$R_i - R_j \geq 2.65\ \frac{(3)\,(4)\,(5)}{6}$$

$$R_i - R_j \geq 8.38$$

The Rj for the example would have to differ by 8.38 to be a significant difference at the confidence value of p = .95. Since the greatest difference between D and B is only 8, one would conclude that there is not a significant difference.

If the confidence level had been p = .9, then the significent $R_i - R_j$ value would have been 7.71 and one could conclude that the difference between D and B was significant.

In the calculations for determining the significance of $R_i - R_j$, a level of confidence of α = .05 will be used.

```
10    OPTION BASE 1
20    DIM D(7,79),Rj(7)
30    REM   THE KENDALL COEFFICIENT OF CONCORDANCE: W
40    REM   PROGRAMED BY MAJ JOHN J. MCGRATH
50    REM   9 APR 1981
60    REM
70    REM   REFERENCE: NONPARAMETRIC STATISTICS FOR THE
80    REM              BEHAVIORAL SCIENCES-SIDNEY SIEGEL
90    REM              MCGRAW HILL 1956
100   REM
110   REM
120   PRINT PAGE
130   DISP "ENTER NUMBER OF ITEMS BEING RANKED: ";
140   INPUT K
150   DISP "ENTER MAXIMUM NUMBER OF SETS: ";
160   INPUT N
170   REDIM D(N,K)
180   N=0
190   PRINT PAGE
200   PRINT "********** E N T E R   D A T A **********"
210   N=N+1
220   PRINT " "
230   PRINT "********** DATA SET: ";N;" **********"
240   PRINT " "
250   FOR I=1 TO K
260   DISP TAB(10);"ITEM NUMBER: ";I;
270   INPUT D(N,I)
280   NEXT I
290   PRINT PAGE
300   PRINT TAB(20);"M O R E   D A T A ?"
310   INPUT Z$
320   IF Z$<>"NO" THEN 190
330   PRINT TAB(20);"V A R I F Y   D A T A   P R I N T O U T"
340   PRINTER IS 7,1,WIDTH(132)
350   MAT PRINT D
360   PRINTER IS 16
370   REM ******** PRINT MATRIX D(N,K)
380   REM
390   PRINT PAGE
400   PRINT TAB(20);"ANY CORRECTIONS (YES OR NO)?  ";
410   INPUT Z$
420   IF Z$="NO" THEN 540
430   IF Z$<>"YES" THEN 390
440   PRINT PAGE
450   PRINT TAB(10);"WHICH DATA SET?";
460   INPUT I
470   PRINT TAB(10);"WHICH ITEM? ";
480   INPUT J
490   PRINT " "
500   PRINT "ENTER CORRECT DATA: ";
510   INPUT D(I,J)
520   GOTO 290
530   REM   CALCULATE THE SUM OF RANKS
540   PRINTER IS 7,1,WIDTH(132)
550   MAT Rj=ZER
560   FOR I=1 TO K
570   FOR J=1 TO N
580   Rj(I)=Rj(I)+D(J,I)
590   NEXT J
600   PRINT "Rj(";I;")=";Rj(I)
610   NEXT I
620   REM   CALCULATE THE MEAN OF Rj
630   Rm=0
640   FOR I=1 TO K
650   Rm=Rm+Rj(I)
660   NEXT I
670   Rm=Rm/K
680   REM   COMPUTE THE SUMATION OF (Rj-Rm)^2
690   S=0
700   FOR I=1 TO K
710   S=S+(Rj(I)-Rm)^2
720   NEXT I
730   REM   COMPUTE W
740   W=S/(1/12*N^2*(K^3-K))
750   PRINT USING 3
760   PRINT "W VALUES 1.";S
770   PRINT "THE KENDALL COEFFICIENT OF CONCORDANCE:W=";W
780   PRINTER PAGE
790   PRINTER IS 16
800   END
```

FOOTNOTES

1. Siegel, Sidney, Nonparametric Statistics for the Behavioral Sciences, (New York, McGraw-Hill, Inc., 1956): 230.

2. Siegel, p. 235 - 236.

3. Siegel, p. 286.

4. Daniel, Wayne, Applied Nonparametric Statistics, (Boston: Houghton-Mifflin Co., 1978): 231.

APPENDIX N

MANHOURS EXPENDED ON THE PROJECT

Appendix N

Project Costs

One goal of testing the methodology to assess health care needs is to keep costs low. The method should not cost more than the benefits derived. While costing the savings of the method is difficult the manhours required to complete the methods basic steps are not. Table 35 lists the basic steps and the manhours associated. The total manhours required were seventy-one, or about nine days. The hours are not concentrated in one nine-day period but spread out over the course of about ten weeks. Thus, the project should not require an individual to be removed from his or her regular duties.

The methodology tested required some concentrated work over a one to two-day period and did require daily modified nominal group sessions for a short period. However, the total time of the methodology does not seem unreasonable for the broad base of data received.

Table 35

Cost in Manhours of Conducting the Project

Project	Manhours
Obtaining mailing lists	
Staff	1.5
Active duty	1.5
Dependents of active duty	2.0
Retirees & their dependents	2.5
Commanders	.25
Prepare envelopes with letter and questionnaire	11.0
Prepare staff questionnaires	2.5
Record results of questionnaires	4.5
Evaluate initial results	3.5
Prepare second survey	1.0
Prepare envelopes with letters and questionnaires	11.0
Conduct fifteen nominal groups	10.0
Record second questionnaireresults	1.5
Evaluate group and questionnaire results	9.0
Prepare envelopes with inpatient questionnaires and letters	5.0
Record results of inpatient questionnaires1	2.0
Evaluate inpatient data	.5
Prepare final problem list	1.5
TOTAL MANHOURS	70.9 or 71 hours

APPENDIX O

UNITED STATES ARMY HEALTH SERVICES COMMAND

OUTPATIENT SATISFACTION SURVEY AND INSTRUCTIONS

OUTPATIENT QUESTIONNAIRE

(AFC Outpatient Assessment)

CLINIC _____ *(CC 30-31)* HSC MTF _____ *(CC 32-33)* DATE _____ TIME _____

PREFER NOT TO COMPLETE THIS QUESTIONNAIRE AT THIS TIME _____ *(CC 34)*

INFORMATION FOR THIS QUESTIONNAIRE WILL HELP US PROVIDE THE BEST POSSIBLE MEDICAL CARE. TO INSURE THE ACCURACY OF THIS SURVEY, IT IS MOST IMPORTANT THAT YOU ANSWER EACH QUESTION WHICH APPLIES TO TODAY'S VISIT. IT WILL TAKE ONLY ABOUT FIVE MINUTES TO COMPLETE THE QUESTIONNAIRE. ALL RESPONSES WILL BE HELD IN STRICTEST CONFIDENCE.

PLACE AN "X" IN THE APPROPRIATE BOX	VERY SATISFIED	SOMEWHAT SATISFIED	DOES NOT APPLY	SOMEWHAT DISSATISFIED	VERY UNSATISFIED
HOW SATISFIED WERE YOU WITH:					
1. THE PHYSICIANS?					
2. THE PHYSICIAN'S ASSISTANTS?					
3. THE NURSE PRACTITIONERS?					
4. THE NURSES?					
5. THE UNLISTED NURSING STAFF?					
6. THE CIVILIAN NURSING STAFF?					
7. THE ANCILLARY PERSONNEL?					
HOW SATISFIED WERE YOU WITH:					
8. THE APPOINTMENT PERSONNEL?					
9. THE MEDICAL RECORDS PERSONNEL?					
10. THE RECEPTIONISTS?					
11. THE LABORATORY STAFF?					
12. THE X-RAY STAFF?					
13. THE PHARMACY STAFF?					
HOW SATISFIED WERE YOU WITH:					
14. THE PARKING FACILITIES?					
15. THE CLINIC'S PHYSICAL FACILITIES?					
16. THE PROVISIONS MADE TO INSURE YOUR PRIVACY?					
17. THE HOURS THE CLINIC WAS OPEN?					
18. THE PLACE/PLACES TO PRESENT SUGGESTIONS OR COMPLAINTS?					
19. THE GENERAL INSTRUCTIONS YOU HAVE RECEIVED?					
HOW SATISFIED WERE YOU WITH THE WAITING TIME:					
20. TO OBTAIN AN APPOINTMENT?					
21. AT THE MEDICAL RECORDS ROOM?					
22. BEFORE RECEIVING TREATMENT?					
23. TO HAVE AN X-RAY OR LABORATORY TEST TAKEN?					
24. AT THE PHARMACY?					
25. IN THE EMERGENCY ROOM?					

AGE ☐☐ *(CC 26-27)*

SEX ☐ Male *(CC 28)* ☐ Female

STATUS *(CC 29)* ☐ Active Duty ☐ Active Duty Dependent ☐ Retired ☐ Retired Dependent ☐ Other *(Civ employee, civ emergency, etc.)*

IF YOU HAVE ANY ADDITIONAL COMMENTS OR SUGGESTIONS, PLEASE WRITE THEM ON THE REVERSE SIDE. PLEASE DEPOSIT YOUR COMPLETED QUESTIONNAIRE IN THE BOX PROVIDED OR FOLD AND RETURN TO THE PERSON WHO GAVE IT TO YOU. THANK YOU FOR TAKING TIME TO ANSWER THIS QUESTIONNAIRE.

[illegible] *(CC 35)* [illegible]

AMMC

Annex B
APC Model #6
Oct 80

CLINIC SURVEYOR INSTRUCTIONS

1. Give a questionnaire to every 5th patient. (In clinics where this would not use up the questionnaires alloted, then distribute them every 2nd, 3rd, or 4th patient.) Do not selectively hand them out or skip patients who would be the next one to receive a questionnaire according to the distribution pattern.

2. Explain to the patient the purpose of the questionnaire. (For example, you may say something such as: "We are taking a survey to find out how our patients feel about the outpatient medical care being given. Would you please fill out this short questionnaire to help us determine how to improve our services?").

3. Maintain a positive attitude in conducting the survey. Encourage patients to take time to answer all questions that apply. The validity of the survey may only be realized through the efforts and attitudes of those personnel who have direct contact with the patient.

4. Show the patient where to return the completed questionnaire and pencil, and ask that he please return them before leaving the clinic.

5. If the patient does not wish to fill out the questionnaire, mark the statement "Prefer not to complete this questionnaire at this time." and place the form with the completed forms.

6. Fill out the following information after all the allotted questionnaires have been returned. Place any comments/suggestions about the survey on the reverse side. This form will be sent to HSC with the questionnaire.

a. Time started giving out forms 0960

b. Number of forms given out 15

c. Sequence that forms were given out. Every 5 patient.

d. Actual number of visitors for entire day 42

To be filled out by the test controller. MTF Code 09

CLINIC NAME AMMC CLINIC CODE 77 DATE OF SURVEY 15 JAN 81

Estimated number of clinic visitors 43

Number of questionnaires given to clinic 15

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END

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